PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

SHEILA C. HOLMAN
Director

DRAFT

Mr. Stephen J. Hutchins
General Manager – Canton and Waynesville Operations
Blue Ridge Paper Products, Inc.
P.O. Box 4000
Canton, North Carolina 28716

SUBJECT: Air Quality Permit No. 08961T19
Facility ID: 4400159
Blue Ridge Paper Products, Inc.
Canton, Haywood County, North Carolina
Fee Class: Title V

Dear Mr. Ferguson:

In accordance with your Air Quality Permit Application for Renewal of a Title V permit received June 29, 2011 and amended on October 10, 2013, we are forwarding herewith Air Quality Permit No. 08961T19 to Blue Ridge Paper Products, Inc., Canton, North Carolina authorizing the construction and operation, of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 02Q .0503(8) have been listed for informational purposes as an "ATTACHMENT." Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

As the designated responsible official it is your responsibility to review, understand, and abide by all of the terms and conditions of the attached permit. It is also your responsibility to ensure that any person who operates any emission source and associated air pollution control device subject to any term or condition of the attached permit reviews, understands, and abides by the condition(s) of the attached permit that are applicable to that particular emission source.

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with both the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of the request for a hearing. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.

You may request modification of your Air Quality Permit through informal means pursuant to NCGS 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions

or issues for which the modification is sought. Please note that this Air Quality Permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under NCGS 150B-23.

The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of NCGS 143-215.108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of NCGS 143-215.108A and may be subject the Permittee to civil or criminal penalties as described in NCGS 143-215.114A and 143-215.114B.

Haywood County has triggered increment tracking under PSD for NO_X. However, this permit renewal does not consume or expand increments for any pollutants.

This Air Quality Permit shall be effective from XXXX YY, 2016, until the earlier of XXXX YY, 2021, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein. Should you have any questions concerning this matter, please contact Heather Sands at (919) 707-8725.

Sincerely yours,

William D. Willets, P.E., Chief, Permitting Section
Division of Air Quality, NC DEQ

Enclosure

cc: Heather Ceron, EPA Region 4
Asheville Regional Office
Connie Horne (cover letter only)
Central Files

ATTACHMENT to Permit No. 08961T19

Insignificant Activities per 15A NCAC 02Q .0503(8)

Emission Source ID No.	Emission Source Description
I-G01001	Chip Unloading
I-G03008	Brownstock Washing B Other Units
I-G06015	Methanol Storage
I-G07017	Evaporator Other Units
I-G08074	Chloride Removal Process (CRP)
I-G09030	Lime Kiln Scrubber Sump Tanks
I-G09033	Lime Kiln Area Other Sources
I-G10036.10-TK-010	Causticizer (Center)
I-G10036.10-TK-009	Causticizer (East)
I-G10036.10-TK-025	Causticizer (South)
I-G10036.10-TK-011	Causticizer (West)
I-G10036.10-TK-015	White Liquor Clarifier (West)
I-G10036.10-TK-018	White Liquor Clarifier (EIMCO)
I-G10036.10-TK-012	White Liquor Clarifier (South)
I-G10091	Lime Mud Washers and Storage
I-G11043	Bark Storage and Handling
I-G11046	Cooling Towers
I-G11047	Power Boilers Other Units
I-G11079	No. 4 Power Boiler Flyash Storage Silo (180,000 gallons)
I-11-CU-006-01	Urea Solution Storage Tanks for SNCR System
I-G12052	No. 20 Paper Machine Trim System
I-G13053	Paper Machine Additives Area
I-G16057	Backup Lime Dewatering System
I-G16080	WTP Low Lift and Splitter Box
I-G16083	WTP Secondary Clarifiers
I-G16084	WTP Sludge Presses and Pile
I-G16085	WTP Other Sources
I-G20075	Main Turpentine Tank
I-G21062	Tall Oil Finishing Plant
I-G21063	Tall Oil Manufacturing Plant

Emission Source ID No.	Emission Source Description
I-G21076	MQB Storage Tank
I-G23064	Liquid Chemical Storage
I-G23065	Bleached Stock Storage
I-G23066.a	Sewer Lines
I-G23066.b	Truck Traffic Fugitives
I-G23066.c	Coal Handling Fugitives
I-G23066.d	Water Treatment
I-G23066.f-ire **MACT – Subpart ZZZZ**	Two 200 horsepower, diesel generators used in the fire control system
I-G23066.f-gen **MACT – Subpart ZZZZ**	One 64 horsepower and one 227 horsepower diesel engine used to turn the lime kiln in the event of sudden power loss
I-G23066.f-rec **MACT – Subpart ZZZZ**	One 100-kW, diesel generator used for emergency breakdowns of the recovery furnaces in the event of sudden power loss
I-G23066.g	Propane Vaporizer
I-G23066.h	Paint Shop Activities
I-G23066.i	Maintenance Shop Activities
I-G23066.j	Carpentry Shop Activities
I-G23067	Parts Washers
I-G24093	Pre-Bleach B Other Sources
I-G02307	Ultra Low Sulfur No. 2 Fuel Oil Storage Tank (1,300 gallons capacity)
I-RB Bunker	Riley Bark Coal Bunker
I-BB Bunker	Big Bill Coal Bunker
I-PG Bunker	Peter G Coal Bunker
I-RC Bunker	Riley Coal Bunker

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement.
2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 02D .1100 “Control of Toxic Air Pollutants” or 02Q .0711 “Emission Rates Requiring a Permit”.
3. For additional information regarding the applicability of MACT or GACT see the DAQ page titled “Specific Permit Conditions Regulatory Guide.” The link to this site is as follows: http://deq.nc.gov/about/divisions/air-quality/air-quality-permits/specific-permit-conditions-regulatory-guide.

Summary of Changes to Permit

The following changes were made to the Blue Ridge Paper Products, Inc., Air Permit No. 08961T18.

Old Page No.	New Page No.	Condition No.	Description of Change(s)
Cover letter	Cover letter		- Amended application type, permit revision numbers and dates. - Changed responsible official from Dane Griswold to Stephen Hutchins.
Cover letter attachment	Cover letter attachment	Summary of changes to permit	- Updated to current permit language.
		Insignificant Activities	- Removed Reject Knots (ID No. I-G03007) – this source was moved to the permit in Section 1 and is a duplicate. Blue Ridge Paper confirmed that it should not be on the insignificant activities list. - Removed No. 4 Boiler Coal Bunker (ID No. I-G11041) – this source is also listed on the permit as ID No. N4-BUNKER. Blue Ridge Paper confirmed that it should not be on the insignificant activities list. - Corrected typo on the ID No. for the No. 4 Power Boiler flyash silo from I-G10079 to I-G11079. This is consistent with the Power Area 11. - Blue Ridge Paper requested that the Depoly System be removed because deploy is no longer used at the mill. - Updated footnotes to correct websites.
1	1	Permit Cover Page	- Updated permit revision number and permit issuance date
2-104	2 – 135	All	- Updated Permit Revision Number in header. - Made minor corrections in capitalization and wording throughout permit. - Updated language throughout permit to be consistent with Permit Shell.
3-11	3 – 11	Section 1	- Updated page numbers in table. - Updated emission source numbers and descriptions throughout table so that TVEE will now reflect the individual sources included under the Emission Source ID No. - Identified sources that are enclosed and do not emit directly to the atmosphere by adding a footnote to the table. - Digesters, evaporators, foul condensate stripper system and turpentine recovery system: removed G07018 (Foul condensate via closed collection system) from the Control Device ID No. and Description and added a note to the Emission Source Description showing that foul condensates from the digester area are sent to the condensate stripper system.

Old Page No.	New Page No.	Condition No.	Description of Change(s)
			- Moved deckers and high density storage to be grouped with the Oxygen Delignification Area. - Added a note to the bleaching system emission source descriptions to highlight that the extraction stage - Removed the word oxidized from the description of the white liquor flow rate in the bleachplant scrubbers (ID Nos. 05-CD-002-01 and 05-CD-017-01) - Divided up the evaporation system to show that the sources are the evaporator sets and their associated hotwells. - Clarified, in the emission source description, that the black liquor solids feed rate in the BLOX system is design rate - Removed primary and alternate operating scenario designations for the smelt dissolving tanks. - Corrected Emission Source ID No. for the green liquor clarification and storage from G10036 to G10089. - Removed igniters from Big Bill description (they will not be installed now that Big Bill is slated for being decommissioned). - Changed description for Riley Bark Boiler to include biomass and corresponding footnote identifying biomass. - Changed Emission Source ID No. for the No. 4 Boiler Bunker from ES-N4-BUNKER to G11041. This source was also listed on the Insignificant Activities List as I-G11041. - Added the word "design" to the liquor injection rate for the Tall Oil Reactor scrubber (ID No. 21-ST-008-01) - Added Nos. 1 and 2 Fiberline Building Ventilation – Fugitives (ID Nos. G23066.k and G23066.l). These sources included in the inventory, but were missing from the permit.
12 – 79	12 – 85	Section 2.1	- Removed size information from condition headers to streamline the headers - Updated tables of summaries of limits and standards throughout permit to be consistent with Permit Shell. - Made sure that the table is in the same order as the conditions for each emission source. - Updated cross references to include at a minimum the first subparagraph (e.g., Section 2.1 A.1)
12 – 13	12 – 13	Section 2.1 A	- updated paragraph A.1.c to add the noncompliance statement.

Old Page No.	New Page No.	Condition No.	Description of Change(s)
15 – 16	14	Section 2.1 D	- Removed 02D .0515 condition from permit for the white liquor oxidation system. This system is not a source of particulate emissions.
17	15	Section 2.1 E	- Removed the production from the description of this source. It is not a permitted limit.
18 – 19	16 – 17	Section 2.1 F	- Updated the 112(r) condition to current permit language; - Added paragraphs F.1.d and F.1.e, to require the periodic submittal of the risk management plan updates.
20	18	Section 2.1 G	- Added noncompliance statement to paragraph G.1.c.
22 – 23	19 – 20	Section 2.1 I and J	- Switched these two conditions. The heavy black liquor storage tanks are now Section 2.1 I and the foul condensate system is not Section 2.1 J. - Added noncompliance statement to paragraph J.1.d
24 – 27	21 – 24	Section 2.1 K	- Removed the generic testing condition in paragraph 2.1 K.1.b and renumbered remaining paragraphs. - Added reference to 02D .0608 to the heading for paragraph K.2. - In Paragraph K.2.e merged noncompliance statements. - Added CAM condition K.4, for PM monitoring compliance with 02D .0508
28 – 30	25 – 28	Section 2.1 L	- Removed the generic testing condition in paragraph L.1.b and renumbered remaining paragraphs. - Added reference to 02D .0608 to the heading for paragraph L.2. - In Paragraph L.2.e merged noncompliance statements. - Added CAM condition L.4, for PM monitoring compliance with 02D .0508
33 – 36	31 – 34	Section 2.1 N	- Removed primary and alternate operating scenario (AOS) distinction. The AOS is now the permit condtion for the Smelt Dissolving Tanks. - Removed condition N.3 (primary operating scenario) and renumbered remaining conditions. - Added CAM condition N.4, for PM monitoring compliance with 02D .0508

Old Page No.	New Page No.	Condition No.	Description of Change(s)
37 – 42	35 – 40	Section 2.1 O	- Removed the generic testing condition in paragraph N.1.b and renumbered remaining paragraphs. - Split the 02D .0508 compliance demonstration for the No. 4 Lime Kiln. The kiln will now be required to meet the Subpart MM monitoring/recordkeeping/reporting requirements when more than 50 percent of the heat input comes from the combustion of No. 6 fuel oil. When 50 percent or less of the heat input comes from the combustion of No. 5 fuel oil, the Permittee will establish monitoring parameters to demonstrate compliance with 02D .0508. (NOTE: The No. 5 Lime Kiln will continue to demonstrate compliance with the Subpart MM monitoring/recordkeeping/reporting requirements for all firing scenarios.) - Added CAM condtion O.5, for PM monitoring compliance with 02D .0508.
47 – 51	47 – 52	Section 2.1 T	- Removed the generic testing condition in paragraph T.1.b and renumbered remaining paragraphs. - Changed the periodic testing requirement in paragraph T.1.b from once every permit cycle to once every five years (and not longer than 61 months between tests). - Added reference to 02D .0608 to the heading for paragraph T.2. - Removed redundant language from paragraph T.4.b. - Added CAM condition T.6 for PM monitoring compliance with 02D .0503.
52 – 55	53 – 57	Section 2.1 U	- Removed the generic testing condition in paragraph U.1.b and renumbered remaining paragraphs. - Changed the periodic testing requirement in paragraph U.1.b from once every permit cycle to once every five years (and not longer than 61 months between tests). - Removed redundant language from paragraph U.2.d. - Added CAM condition U.3 for PM monitoring compliance with 02D .0530
56 – 60	58 – 64	Section 2.1 V	- Removed the generic testing condition in paragraph V.1.b and renumbered remaining paragraphs. - Added provisions for when reevaluating or reestablishing the monitoring parameters to paragraph V.5.c. - Added language to paragraph V.5.d stating that the compliance monitoring parameters shall not apply during subsequent testing. - Added CAM condition V.7 for PM monitoring compliance with 02D .0530

Old Page No.	New Page No.	Condition No.	Description of Change(s)
61 – 62	65 – 68	Section 2.1 W	- Removed reference to cyclones. According the Permittee, the cyclones are a part of the process and are not control devices. - Added CAM condition W.3 for PM monitoring compliance with 02D .0515.
63 – 64	69 – 70	Section 2.1 Y	- Added paragraph Y.1.e requiring that records of any maintenance performed on the bagfilters be submitted within 30 days of a written request. Renumbered remaining paragraph.
65 – 66	71 – 72	Section 2.1 AA	- Removed reference to liquid and gaseous fuels and combustion air from paragraph AA.1.a for the 02D .0515 condition. This is not a fuel combustion source and the statement was unnecessary.
N/A	73	Section 2.1 DD	- Added new condition for building fugitives. These sources are only subject to toxics conditions and do not have any other applicable regulations. - Renumbered remaining Section 2.1 conditions.
70 – 72	76 – 78	Section 2.1 GG	- Renumbered from Section 2.1 FF to GG. - Changed ID number for the No. 4 Boiler Bunker (from ID No. N4-BUNKER to G11041). This source was already in the permit on the insignificant activities list with ID No. I-G11041 but had been moved to the permit but not correctly renumbered. - Added the PSD standard to the summary of limits and standards table. - Removed generic testing condition in paragraph FF.2.b and renumbered remaining paragraphs. - Revised the monthly monitoring requirement in paragraph FF.2.d to be equivalent to the visible emission monitoring requirements in 02D .0521. - Added opacity readings and performance test results to the summary report content requirements.
80 – 83	86 – 89	Section 2.2 A	- Split the condition for the operations restrictions into two paragraphs: one for operating restrictions and one for emissions limitations.
84 – 90	91 – 100	Section 2.2 C.1	- Updated the table in C.1 to be consistent with the Section 1 equipment table - Added clarification to summary of limits and standards table for the nonexempt source requiremetns. - Added paragraph C.1.b.iv to refer to the 112(j) startup, shutdown and malfunction requirements, which apply until September 11, 2020. - Moved paragraph C.1.e to C.1.c.iii to make it more clear that there are venting allowances for the LVHC and HVLC sources. - Updated the requirements for the pulping condensate requirements to clarify which sources are subject.

Old Page No.	New Page No.	Condition No.	Description of Change(s)
			- Added the new 5-year performance testing requirement (paragraph C.1.i). Also included provisions for testing outside established monitoring ranges. - Added standards for enclosures and closed-vent systems (paragraph C.1.j) - Expanded the requirements in the permit to parallel rule language for the monitoring and inspecting of enclosures, closed vent and closed collection systems in paragraph C.1.p - added SSM conditions (C.1.r, and s) - added recordkeeping for malfunctions including affirmative defense.. - added reporting for malfunctions, performance tests and affirmative defense.
90 – 92	100 – 103	Section 2.2 C.2	- Updated the list of sources for which the EBP applies in C.2.a. - Added "(including period of startup, shutdown, or malfunction)" to the calculation of the periods of excess emissions to parallel the Subpart S requirements that emissions standards apply at all times. - added a 5-year annual testing requirement to C.2.e. - added SSM conditions to C.2.j and C.2.k. - Removed references to a SSM plan from entire section. - added recordkeeping for malfunctions including affirmative defense. - added reporting for malfunctions, performance tests and affirmative defense.

Old Page No.	New Page No.	Condition No.	Description of Change(s)
93 – 97	104 – 108	Section 2.2 D	- Removed Table 2.2 D-1 from permit and added bubble emission limits to paragraph D.1.b to be more clear about the limits that apply. - Added paragraph D.1.b.ii to refer to the 112(j) startup, shutdown and malfunction requirements. - Added COMS-specific language from Subpart MM to paragraph D.1.e. - Added noncompliance sentence to paragraph D.1.g. - Added provisions for testing outside of operational parameters ranges during performance testing for the purpose of reevaluating compliance in paragraphs D.1.g and D.1.i. - Removed POS-related conditions and made the AOS the operating conditions in Table 2.2 D-2 for the No. 11 Smelt Dissolving Tank. - Updated paragraph D.2.k to include rule language for recordkeeping related to the SSM plan. - Updated paragraph D.2.o to be consistent with Subpart MM.
98 – 105	109 – 117	Section 2.2 E	- Corrected the PM emission limitation equation in paragraph E.1.a. The factor related to the green wood was incorrect. - Corrected the CO emission limitation equation in paragraph E.1.a to only apply when firing coal and fuel oil. - added noncompliance sentence where missing throughout Section 2.2 E.1. - Rearranged and consolidated paragraphs E.1.n through E.1.t to now be paragraphs E.1.n through E.1p. Renumbered remaining paragraphs. - Added provisions to paragraphs E.1.s and E.1.y for operating outside of operating parameter ranges when reevaluating compliance during performance testing.
107 – 109	119 – 121	Section 2.2 G	- Reformatted the entire condition to be consistent with numbering system used throughout the permit. - Added noncompliance statements throughout. - Added paragraph G.4.a to insert the sunset date of the Subpart S 112j provisions. Renumbered remaining paragraphs.
110	122	Section 2.3 A	Replaced condition with new toxics limits developed according to 15A NCAC 02D .1100.

Air Quality
ENVIRONMENTAL QUALITY

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.(s)	Effective Date	Expiration Date
08961T19	08961T18	XXXX YY, 2016	XXXX YY, 2021

Until such time as this permit expires or is modified or revoked, the below named Permittee is authorized to construct and operate the emission source(s) and associated air pollution control device(s) specified herein, in accordance with the terms, conditions, and limitations within this permit. This permit is issued under the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended, and Title 15A North Carolina Administrative Codes (15A NCAC), Subchapters 02D and 02Q, and other applicable Laws.

Pursuant to Title 15A NCAC, Subchapter 02Q, the Permittee shall not construct, operate, or modify any emission source(s) or air pollution control device(s) without having first submitted a complete Air Quality Permit Application to the permitting authority and received an Air Quality Permit, except as provided in this permit.

Permittee:	**Blue Ridge Paper Products, Inc.**
Facility ID:	**4400159**
Facility Site Location:	**175 Main Street**
City, County, State, Zip:	**Canton, Haywood County, North Carolina, 28716**
Mailing Address:	**P.O. Box 4000**
City, State, Zip:	**Canton, North Carolina 28716**
Application Number:	**4400159.11A**
Complete Application Date:	**June 29, 2011**
Primary SIC Code:	**2621**
Division of Air Quality, Regional Office Address:	**Asheville Regional Office 2090 US Highway 70 Swannanoa, North Carolina, 28778**

Permit issued this the YYth day of XXXX, 2016

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William D. Willets, P.E., Chief, Permitting Section
By Authority of the Environmental Management Commission

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ATTACHMENT

List of Acronyms

SECTION 1- PERMITTED EMISSION SOURCE(S) AND ASSOCIATED AIR POLLUTION CONTROL DEVICE(S) AND APPURTENANCES

The following table contains a summary of all permitted emission sources and associated air pollution control devices and appurtenances:

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
CHIP HANDLING AND STORAGE (AREA 01)				
NA*	G01002*	Chip Handling Operations	NA	NA
NA*	G01003*	Chip Storage Area	NA	NA
DIGESTER AREA (AREA 02)				
12, 91	G02004 **MACT, Subpart S**	***Digester Area:*** Eighteen (18) batch digesters (No. 02-PU-001) No. 1 Hardwood Blow Heat System: Blow Tank (No. 02-PU-005) Fiberline Accumulator (No. 02-PU-006) Secondary Condenser (No. 02-PU-008) No. 2 Pine Blow Heat System, including: Blow Tank (No. 02-PU-003) Fiberline Accumulator (No. 02-PU-007) Secondary Condenser (No. 02-PU-009) *NOTE: Foul condensates to condensate stripper system via closed collection system (ID No. G07018)*	G09028 (primary) G09029 (backup)	No. 4 Lime Kiln via NCG closed collection system No. 5 Lime Kiln via NCG closed collection system
BROWNSTOCK WASHING (AREA 03)				
14, 92	G03005 **MACT, Subpart S**	***No. 1 Hardwood Fiberline Brownstock Washing System:*** Nos. 1 through 4 Brownstock Washers (No. 03-PU-001) Foam Tank No. 1 (No. 03-TK-003) Foam Tank No. 2 (No. 03-TK-004)	NA	NA
14, 92	G03006 **MACT, Subpart S**	***No. 2 Pine Fiberline Brownstock Washing System:*** Washers and Filtrate Tanks (No. 03-PU-032)[c] Brownstock Washer Mix Tanks (Nos. 03-TK-015, 03-TK-016, 03-TK-017)	NA	NA
123	G03007	Reject Knots	NA	NA
OXYGEN DELIGNIFICATION (AREA 04)				
14, 92, 100	G04009 **MACT, Subpart S**	***No. 1 Hardwood Fiberline Oxygen Delignification System:*** O_2 reactor (No. 04-PU-001)[c] O_2 Blow Tank (No. 04-TK-005) Post-O_2 Washer (No. 04-PU-002) Post-O2 Filtrate Chest (No. 04-TK-008)	NA	NA
14, 92, 100	G04010 **MACT, Subpart S**	***No. 2 Pine Fiberline Oxygen Delignification System:*** O_2 reactor (No. 04-PU-014)[c] O_2 blow tank (No. 04-TK-018) Post-O_2 washer (No. 04-PU-016)	NA	NA

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
14, 123	G04011	White Liquor Oxidation System (maximum production rate of 40,500 pounds of white liquor per hour)	04-CD-021-01	Chevron demister
14, 93	G04025 **MACT, Subpart S**	No. 1 Hardwood Fiberline Pulp Screening System (No. 04-TK-009)	NA	NA
14, 93	G04026 **MACT, Subpart S**	No. 2 Pine Fiberline Pulp Screening System	NA	NA
73, 93	G24087 **MACT, Subpart S**	***No. 1 Hardwood Fiberline Deckers:*** East Decker (No. 04-PU-003) West Decker (No. 04-PU-004) Decker Filtrate Tank (No. 04-TK-007)	NA	NA
73, 93	G24088 **MACT, Subpart S**	***No. 2 Pine Fiberline Deckers:*** Decker (No. 04-PU-015) Decker Filtrate Tank (No. 04-TK-017)	NA	NA
73, 124	G24092	Hardwood Brownstock High Density Storage	NA	NA
73, 124	G24094	Pine Brownstock High Density Storage	NA	NA
BLEACHING (AREA 05)				
15, 91, 121	G05012 **MACT, Subpart S**	***No. 1 Hardwood Fiberline Bleaching System:*** D1 Stage (ClO_2): Tower (No. 05-PU-002), Washer (No. 05-PU-004), Filtrate Tank (No. 05-TK-003) Eo Stage (Extraction): Tower (No. 05-PU-008), Washer (No. 05-PU-007), Filtrate Tank (No. 05-TK-009) D2 stage (ClO_2): Tower (No. 05-PU-010) Washer (No. 05-PU-012) Filtrate Tank (No. 05-TK-011) NOTE: Extraction stage is not subject to MACT Subpart S	05-CD-002-01	No. 1 Fiberline Bleaching countercurrent packed tower-type wet scrubber (190 gallons per minute white liquor design flow rate)
15, 91, 121	G05013 **MACT, Subpart S**	***No. 2 Pine Fiberline Bleaching System:*** D1 Stage (ClO_2): Tower (No. 05-PU-017), Washer[c] (No. 05-PU-022), Filtrate Tank (No. 05-TK-018) Eo Stage (Extraction): Tower (No. 05-PU-019), Washer[c] (No. 05-PU-023), Filtrate Tank (No. 05-TK-020), D2 Stage (ClO_2): Tower (No. 05-PU-021), Washer[c] (No. 05-PU-024), Filtrate Tank (No. 05-TK-027) NOTE: Extraction stage is not subject to MACT Subpart S	05-CD-017-01	No. 2 Fiberline Bleaching countercurrent packed tower-type wet scrubber (70 gallons per minute white liquor design flow rate)
15, 123	G05073	Minerals Removal Process (MRP)	NA	NA

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
CHLORINE DIOXIDE PREPAREATION (AREA 06)				
16, 123	G06014 **112(r)**	***Chlorine Dioxide Generation System:*** R-8 Chlorine Dioxide Generator (No. 06-PU-002), and Three Chlorine Dioxide Solution Storage Tanks (Nos. 06-TK-007, 06-TK-008, and 06-TK-009, 125,000 gallons capacity, each)	06-CD-002-01 05-CD-002-01	Primary Operating Scenario: Two scrubbers in series: one two-section packed tower wet scrubber (70 to 80 gallons of chilled water per minute minimum flow rate); and No. 1 Fiberline Bleaching countercurrent packed tower-type wet scrubber (190 gallons per minute white liquor design flow rate) Alternate Operating Scenario: One two-section packed tower wet scrubber (ID No. 06-CD-002-01)
EVAPORATORS (AREA 07)				
18, 91	G07016 **MACT, Subpart S**	***Black Liquor Evaporation System:*** Swenson Countercurrent Evaporator, consisting of six effects and one concentrator -147,402 pounds per hour black liquor solids maximum design capacity (No. 07-PU-002) Swenson Evaporator Hotwell - collects condensates from the 4th, 5th, and 6th evaporator effects (No. 07-TK-006) *NOTE: Foul condensates to condensate stripper system via closed collection system (ID No. G07018)* West GB Countercurrent Evaporator, consisting of six effects and steam liquor heater - 131,614 pounds per hour black liquor solids maximum design capacity (No. 07-PU-003) West GB Evaporator Hotwell – collects condensates from the 2nd through 6th evaporator effects (No. 07-TK-007 *NOTE: Foul condensates to condensate stripper system via closed collection system (ID No. G07018)*	G09028 (primary) or G09029 (backup)	No. 4 Lime Kiln via NCG closed collection system No. 5 Lime Kiln via NCG closed collection system (Control system serves both evaporators)

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
20, 92	G07018 **NSPS, Subpart BB MACT, Subpart S**	***Foul Condensate Stripper System***: Condensate Stripper (No. 07-PU-015), Stripper Feed Tank (No. 07-TK-011), and Reflux Tank (No. 07-TK-014) *NOTE: Foul condensates are collected from the digester area (ID No. G02004), the evaporators (ID No. G07016), the turpentine recovery systems (ID Nos. G20060 and G20062), the LVHC collection system, the HVLC collection system, and the black liquor oxidation system (ID No. G08022)*	G09029 (primary) or G09028 (backup)	No. 5 Lime Kiln via NCG closed collection system No. 4 Lime Kiln via closed collection system
19, 124	G07019	***Heavy Black Liquor Storage***: East Storage Tank (No. 07-TK-023) West Storage Tank (No. 07-TK-024) Red Liquor Tank (No. 07-TK-022) Backup Tank (No. 07-TK-025)	NA	NA
19, 124	G07086	***Weak Black Liquor Storage:*** Eight Storage Tanks (No. 07-TK-004, 07-TK-013, 07-TK-016, 07-TK-017, 07-TK-018, 07-TK-019, 07-TK-020, 07-TK-021)	NA	NA
RECOVERY (AREA 08)				
21, 88, 104, 119, 125	G08020 **MACT, Subpart MM**	No. 10 Recovery Furnace (No. 08-PU-001): Black liquor solids, ultra-low sulfur No. 2 fuel oil blended with black liquor solids, natural gas, and No. 6 fuel oil-fired new design recovery furnace (121,000 pounds per hour maximum black liquor solids firing rate and 382 million Btu per hour maximum heat input rate from natural gas and No. 6 fuel oil)	08-CD-001-01	3-Chamber, 6-field wet bottom electrostatic precipitator (nominal 115,236 square feet of collection plate area)
21, 88, 104, 119, 125	G08021 **MACT, Subpart MM**	No. 11 Recovery Furnace (No. 08-PU-002): Black liquor solids, ultra-low sulfur No. 2 fuel oil blended with black liquor solids, natural gas, and No. 6 fuel oil-fired new design recovery furnace (121,000 pounds per hour maximum black liquor solids firing rate, 382 million Btu per hour maximum heat input rate from natural gas and No. 6 fuel oil, and 0.25 million Btu per hour maximum heat input rate from propane igniters)	08-CD-002-01	3-Chamber, 4-Field wet bottom electrostatic precipitator (nominal 115,236 square feet of collection plate area)
29, 95, 125	G08022	Black liquor oxidation system (No. 08-PU-005, 228,000 pounds per hour maximum design black liquor solids feed rate based on calendar day average)	CD-BLO CD-BLOXRTO CD-RTOSCR	Three cyclones, one on each oxidizer tank (60 inches in diameter, each); One natural gas-fired regenerative thermal oxidizer (4.2 million Btu per hour heat input); One caustic scrubber (5 to 7-gallons per minute NaOH injection design flow rate)

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
31, 104, 119, 125	G08023 **MACT, Subpart MM NSPS, Subpart BB**	No. 10 Smelt Dissolving Tank (No. 08-PU-011, 121,000 pounds per hour black liquor solids feed rate)	08-CD-011-01	chevron mist eliminator (33.5 square feet of collection surface area) with a secondary shower after the demister pad (86 gallons per minute minimum 3-hour average flow rate)
31, 104, 119, 125	G08024 **MACT, Subpart MM NSPS Subpart BB**	No. 11 Smelt Dissolving Tank (No. 08-PU-012, 121,000 pounds per hour black liquor solids feed rate)	08-CD-012-01	chevron mist eliminator (33.5 square feet of collection surface area) with a secondary shower after the demister pad (86 gallons per minute minimum 3-hour average flow rate)
LIME PRODUCTION (AREA 09)				
44, 123	G09027	***Lime Production – Other Units:*** No. 4 Lime Pre-Coat Filter (No. 09-PU-001), No. 5 Lime Pre-Coat Filter (No. 09-PU-002), No. 6 Lime Pre-Coat Filter (No. 09-PU-004)	NA	NA
35, 88, 104, 120	G09028 **MACT, Subpart MM**	No. 4 Lime Kiln (No. 09-PU-009): Natural gas/No. 6 fuel oil-fired lime kiln (9.0 tons per hour maximum calcium oxide design capacity; 60.0 million Btu per hour maximum permitted heat input rate, with propane igniters) *NOTE: Provides primary control for collected NCG foul gases and backup control for stripper off-gases from the condensate stripper system.*	09-CD-009-01	Cyclonic mist eliminator (120 inches in diameter) in series with a flooded disc-type wet scrubber (360 gallons per minute liquid design flow rate, with pH control)
35, 88, 104, 120	G09029 **MACT, Subpart MM**	No. 5 Lime Kiln (No. 9-PU-010): Natural gas/No. 6 fuel oil-fired lime kiln (12.0 tons per hour maximum calcium oxide design capacity; 100.0 million Btu per hour maximum permitted heat input rate, with propane igniters) *NOTE: Provides backup control for collected NCG foul gases and primary control for stripper off-gases from the condensate stripper system.*	09-CD-010-01	One 4-stage MicroMist™ venturi scrubber (quench, venturi, impingement tray, and chevron mist eliminator, 156 inches in diameter, 250 gallons per minute venturi design rate, with pH control)
43	G09031	***No. 6 Lime Silo Dust Collection System:*** Lime Storage Silo (No. 09-TK-018, 150 tons maximum capacity) Fresh Lime Storage Silo (No. 09-TK-019, 150 tons maximum capacity) No. 6 Hot Lime Conveyor (No. 09-PU-011) Lime Crusher (No. 09-PU-012) Bucket Elevator (No. 09-PU-013)	09-CD-018-01	Cartridge-type bagfilter (1,728 square feet of filter area)

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
41	G09032	***No. 5 Lime Silo Dust Collection System:*** No. 5 Lime Storage Silo (No. 09-TK-013, 400 tons maximum capacity) Hot Lime Conveyor (No. 09-PU-014), Lime Crusher (No. 09-PU-015), Bucket Elevator (No. 09-PU-016)	09-CD-013-01	Cartridge-type bagfilter (1,728 square feet of filter area)
CAUSTICIZING (AREA 10)				
45, 123	G10035	No. 5 Lime Slaker (No. 10-PU-027) – serves No. 5 Lime Kiln	10-CD-027-01	one natural draft condensing scrubber (nominal 30 gallons per minute mill water injection rate)
45, 123	G10034	No. 6 Lime Slaker (No. 10-PU-036) – serves No. 4 Lime Kiln	10-CD-036-01	one natural draft scrubber (nominal 30 gallons per minute mill water injection rate)
45, 124	G10089	***Green liquor clarification and storage:*** West Green Liquor Storage (No. 10-TK-002) North Green Liquor Storage (No. 10-TK-013) South Green Liquor Clarifier (No. 10-TK-005) North Green Liquor Clarifier (No. 10-TK-006)	NA	NA
45, 124	G10090	Green liquor stabilization (No. 10-TK-008)	NA	NA
POWER (AREA 11)				
47, 86, 109	G11037 **PSD Case-by-Case MACT**	Big Bill (No. 11-CU-003): Coal-fired utility boiler (364 million Btu per hour maximum heat input rate) equipped with low-NO_X burners	11-CD-003-01	2-Chamber, 3-Field electrostatic precipitator (51,840 square feet of plate area)
47, 86, 109	G11038 **PSD Case-by-Case MACT**	Peter G (No.11-CU-004): Coal-fired utility boiler (364 million Btu per hour maximum heat input rate), equipped with low-NO_X burners and natural gas/kerosene igniters	11-CD-004-01	2-Chamber, 3-Field electrostatic precipitator (51,840 square feet of plate area)
47, 86, 109	G11039 **PSD Case-by-Case MACT**	Riley Coal (No. 11-CU-005): Coal-fired utility boiler (399 million Btu per hour maximum heat input rate) equipped with low-NO_X burners and natural gas/kerosene igniters	11-CD-005-01 11-CD-005-02[a,b]	2-Chamber, 3-Field electrostatic precipitator (67,392 square feet of plate area) Wet caustic scrubber

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
53, 86, 109	G11040 **NSPS, Subpart D PSD Case-by-Case MACT**	No. 4 Power Boiler (No. 11-CU-006): Coal/No. 2/No. 6 fuel oil-fired power boiler (535 million Btu per hour maximum heat input rate) pulverized dry bottom-type design, equipped with low-NO_X burner components and a Separated Overfire Air (SOFA) system	11-CD-006-01 11-CD-006-02 11-CD-006-03[a,b]	2-Chamber, 4-Field electrostatic precipitator (115,236 square feet of plate area) Urea-based Selective Non-Catalytic Reduction (SNCR) NO_X emission reduction system Wet caustic scrubber
58, 109	G11042 **Case-by-Case MACT**	Riley Bark Boiler (No. 11-CU-016): Biomass[d]/coal-fired hybrid suspension grate boiler (380 million Btu per hour maximum heat input rate) with partial flyash reinjection and grate fire ignition (kerosene and rags)	11-CD-016-01 11-CD-016-02	multicyclone (approximately 160 tubes, 9 inches in diameter, each) venturi-type wet scrubber (water with pH adjustment)
65	G11044	Riley Bark Boiler Fuel Feed System and associated transfer cyclone (No. 11-PU-042)	NA	NA
65	G11045	Utility Boiler Flyash Handling System Main Flyash Silo (25,300 cubic feet); and Pneumatic flyash collection system	11-CD-021-01 11-CD-021-02	One bin vent bagfilter (95 square feet of filter area); One cyclone separator with bagfilter (479 square feet of filter area)
65	G11025	No. 4 Power Boiler Flyash Transfer Silo (600 cubic feet)	11-CD-021-03	One bin vent bagfilter (26 square feet of filter area)
76	G11052 G11053 **NSPS Subpart Y**	***Coal Processing and Conveying:*** Crusher (No. 13A-CRUSHER) Coal Conveying and Storage System Equipment: o Collecting Conveyor No. 1 (No. 13A-001) o Receiving Conveyor No. 2 (No. 13A-002) o Stockpile Conveyor No. 3 (No. 13A-003) o Overland Conveyor No. 4 (No. 13A-004) o Overland Conveyor No. 5 (No. 13A-005) o Transfer Conveyor No. 6 (No. 13A-006) o Transfer Conveyor No. 7 (No. 13A-007) o Bunker Feed Conveyor No. 8 (No. 13A-008)	NA	NA
76	G11041 **NSPS Subpart Y**	No. 4 Boiler Bunker (No. N4-BUNKER)	CD-013-011, CD-013-012, CD-013-015	Three fabric filters (65 square feet of filter area, each)
79, 88, 90	G11050[a] **NSPS, Subpart Db MACT, Subpart DDDDD**	No. 1 Natural Gas Package Boiler: Natural gas-fired package boiler (225 million Btu per hour maximum heat input rate) equipped with low NO_X burners and an oxygen trim system	NA	NA

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
79, 88, 90	G11051[a] **NSPS, Subpart Db MACT, Subpart DDDDD**	No. 2 Natural Gas Package Boiler: Natural gas-fired package boiler (225 million Btu per hour maximum heat input rate) equipped with low NO_X burners and an oxygen trim system	NA	NA
PAPER MACHINES (AREA 12)				
69, 123	G12048 G12049 G12050 G12051	***Four paper machines:*** No. 20 Paper Machine; No. 19 Paper Machine; No. 12 Paper Machine; No. 11 Paper Machine	NA	NA
118	G12077 **Case-by-Case MACT**	Two natural gas and/or propane hot oil heaters installed on the calendar section of No. 19 Paper Machine	NA	NA
CHEMICAL PREPARATION (AREA 13)				
69	G13054	East starch storage silo (30 tons per hour maximum throughput)	13-CD-014-01	one bagfilter (255 square feet of filter area)
69	G13055	West starch storage silo (30 tons per hour maximum throughput)	13-CD-016-01	one bin vent filter (183 square feet of filter area)
69	G13056	Center starch storage silo (30 tons per hour maximum throughput)	13-CD-020-01	one bagfilter (255 square feet of filter area)
WASTEWATER TREATMENT PLANT (AREA 16)				
71, 123	G16081	WTP Primary Clarifiers	NA	NA
71, 123	G16082	WTP Aeration and Digestion Basins	NA	NA
PAPER CONVERTING (AREA 19)				
71	G19058	Rewinders on Trim System No. 1	NA	NA
71	G10959	Rewinders on Trim System No. 2	NA	NA
TURPENTINE RECOVERY (AREA 20)				
73, 92	G20060 **MACT, Subpart S**	***No. 1 Hardwood Turpentine Recovery System:*** Turpentine Entrainment System (No. 20-PU-001) Turpentine Condenser (No. 20-PU-002) Turpentine Underflow Tank (No. 20-TK-004) Turpentine Transfer Tank (No. 20-TK-005) *NOTE: Foul condensates to condensate stripper system via closed collection system (ID No. G07018)*	G09028 (primary) or G09029 (backup)	No. 4 Lime Kiln via NCG closed collection system No. 5 Lime Kiln via NCG closed collection system
73, 92	G20062 **MACT, Subpart S**	***No. 2 Pine Turpentine Recovery System:*** Turpentine Entrainment System (No. 20-PU-006) Turpentine Condenser (No. 20-PU-007) Turpentine Decanter (No. 20-TK-008) Turpentine Underflow Tank (No. 20-TK-009) Turpentine Transfer Tank (No. 20-TK-010) *NOTE: Foul condensates to condensate stripper system via closed collection system (ID No. G07018)*	G09028 (primary) or G09029 (backup)	No. 4 Lime Kiln via NCG closed collection system No. 5 Lime Kiln via NCG closed collection system

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
TALL OIL PRODUCTION (AREA 21)				
73, 123	G21072	Tall Oil Reactor	21-ST-008-01	Packed tower-type wet scrubber (10 to 15 gallons per minute minimum white liquor design injection rate)
NCG COLLECTION (AREA 23)				
NA*	G23078*	NCG Collection System Fugitives	NA	NA
73, 123	G23066.k	No. 1 Fiberline Building Ventilation – Fugitives (former ID No. G0308a)	NA	NA
73, 123	G23066.l	No. 2 Fiberline Building Ventilation – Fugitives (former ID No. G0410a)	NA	NA
MISCELLANEOUS				
74	16-CU-001 **MACT, Subpart ZZZZ**	One 1850 horsepower, diesel-fired emergency generator	NA	NA

*Sources with no applicable requirements that emit greater than *de minimis* for classification as Insignificant Activities per 15A NCAC 02Q .0503(8).

[a] These emission sources (ID Nos. G11050 and G11051) are listed as a 15A NCAC 02Q .0501(c)(2) modification. The Permittee shall file a Title V Air Quality Permit Application on or before 12 months after commencing operation in accordance with General Condition NN.1. The permit shield described in General Condition R does not apply and compliance certification as described in General Condition P is not required.

[b] This control device is not necessary for compliance with any currently applicable regulation.

[c] Sources are fully enclosed and do not have emission points.

[d] Biomass fuel must meet the clean cellulosic biomass definition as provided in 40 CFR 241.2 or the specific non-hazardous secondary material (NHSM) categories in 40 CFR 241.4. The Permittee must notify the Division of Air Quality in writing within 30 days of beginning use of any new biomass fuel. For any fuel that is not clearly defined by 40 CFR 241.1 or 241.4, the Permittee must first submit a NHSM determination request to the Division of Air Quality under 40 CFR 241.2 and 241.3. A biomass fuel may also be approved as a NHSM by EPA.

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

2.1- Emission Source(s) and Control Devices(s) Specific Limitations and Conditions

The emission source(s) and associated air pollution control device(s) and appurtenances listed below are subject to the following specific terms, conditions, and limitations, including the testing, monitoring, recordkeeping, and reporting requirements as specified herein:

DIGESTER AREA (AREA 02)

A. Digester Area (ID No. G02004), consisting of:

- **Eighteen (18) batch digesters (No. 02-PU-001);**
- **No. 1 Hardwood Blow Heat System:**
  - **Blow Tank (No. 02-PU-005),**
  - **Fiberline Accumulator (No. 02-PU-006), and**
  - **Secondary Condenser (No. 02-PU-008);**
- **No. 2 Pine Blow Heat System:**
  - **Blow Tank (No. 02-PU-003),**
  - **Fiberline Accumulator (No. 02-PU-007), and**
  - **Secondary Condenser (ID No. 02-PU-009).**

Gases are collected via the NCG closed collection system and burned in the No. 4 Lime Kiln (ID No. G09028, primary) or No. 5 Lime Kiln (ID No. G09029, backup). Foul condensates are collected in a closed collection system and treated in the Foul Condensate System (ID No. G07018).

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Total reduced sulfur	5 ppm (as H_2S) by volume on a dry basis	15A NCAC 02D .0528
Toxic air pollutants	State Enforceable Only (See Section 2.3 A)	15A NCAC 02D .1100
Hazardous air pollutants	See Section 2.2 C.1	15A NCAC 02D .1111 (40 CFR Part 63, Subpart S)

1. 15A NCAC 02D .0528: TOTAL REDUCED SULFUR FROM KRAFT PULP MILLS

a. The emissions of total reduced sulfur shall not exceed five parts per million from the digester **(ID No. G02004)**, measured as hydrogen sulfide on a dry gas basis and averaged per discrete contiguous 12-hour time period.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0528

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

c. Except as allowed under Section 2.2 C.1.c, the Digester Area emission sources **(ID No. G02004)**, shall comply with the limitation above by ensuring the gases are combusted in the No. 4 Lime Kiln **(ID No. G09028)** or the No. 5 Lime Kiln **(ID No. G09029)**. The Permittee shall be considered in noncompliance with 15A NCAC 02D 0528 if the gases are not combusted in the No. 4 or No. 5 Lime Kiln.

d. The Permittee shall follow the closed-vent inspection procedures per Section 2.2 C.1 to ensure that the emissions are routed to either the No. 4 Lime Kiln **(ID No. G09028)** or No. 5 Lime Kiln **(ID No. G09029)** as specified

above. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0528 if these procedures are not followed or if the records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

BROWNSTOCK WASHING (AREA 03)

B. Brownstock Washing Area, consisting of:

- **No. 1 Hardwood Fiberline Brownstock Washing System (ID No. G03005):**
  - **Nos. 1 through 4 Brownstock Washers (No. 03-PU-001)**
  - **Foam Tank No. 1 (No. 03-TK-003)**
  - **Foam Tank No. 2 (No. 03-TK-004)**
- **No. 2 Pine Fiberline Brownstock Washing System (ID No. G03006)**
  - **Washers and Filtrate Tanks (Nos. 03-PU-032)**
  - **Brownstock Washer Mix Tanks (Nos. 03-TK-015, 03-TK-016, and 03-TK-017)**

NOTE: No. 2 Pine fiberline brownstock washing system washers and filtrate tanks are fully enclosed and are not sources of emissions.

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Toxic air pollutants	State Enforceable Only (See Section 2.3 A)	15A NCAC 02D .1100
Hazardous air pollutants	See Section 2.2 C.1	15A NCAC 02D .1111 (40 CFR Part 63, Subpart S)

OXYGEN DELIGNIFICATION (AREA 04)

C. Oxygen Delignification Area, consisting of:

- **No. 1 Hardwood Fiberline Oxygen Delignification System (ID No. G04009), including:**
  - **one O_2 reactor,**
  - **one oxygen blow tank, and**
  - **post-O_2 washers**
- **No. 2 Pine Fiberline Oxygen Delignification System (ID No. G04010), including:**
  - **one O_2 reactor,**
  - **one oxygen blow tank, and**
  - **post-O_2 washers**
- **No. 1 Hardwood Fiberline Pulp Screening System (ID No. G04025)**
- **No. 2 Pine Fiberline Pulp Screening System (ID No. G04025)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous air pollutants	See Section 2.2 C.1	15A NCAC 02D .1111 (40 CFR Part 63, Subpart S)

D. White Liquor Oxidation System (ID No. G04011), equipped with a chevron demister (ID No. 04-CD-021-01)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Toxic air pollutants	State Enforceable Only (See Section 2.3 A)	15A NCAC 02D .1100

BLEACHING (AREA 05)

E. No. 1 Hardwood Fiberline Bleaching System (ID No. G05012):

- **D1-Stage (ClO_2):**
  - **Tower (No. 05-PU-002),**
  - **Washer (No. 05-PU-004),**
  - **Filtrate Tank (No. 05-PU-003)**
- **Eo-Stage (Extraction):**
  - **Tower (No. 05-PU-008),**
  - **Washer (No. 05-PU-007),**
  - **Filtrate Tank (No. 05-TK-009)**
- **D2-Stage (ClO_2)**
  - **Tower (No. 05-PU-010),**
  - **Washer (No. 05-PU-012),**
  - **Filtrate Tank (No. 05-TK-011)**

Exhausts to the No. 1 Fiberline Bleaching countercurrent packed tower-type wet scrubber (ID No. 05-CD-002-01).

No. 2 Pine Fiberline Bleaching System (ID No. G05013):

- **D1-Stage (ClO_2):**
  - **Tower (No. 05-PU-017),**
  - **Washer (No. 05-PU-022),**
  - **Filtrate Tank (No. 05-TK-018)**
- **Eo-Stage (Extraction):**
  - **Tower (No. 05-PU-019),**
  - **Washer (No. 05-PU-023),**
  - **Filtrate Tank (No. 05-TK-020)**
- **D2-Stage (ClO_2):**
  - **Tower (No. 05-PU-021),**
  - **Washer (No. 05-PU-024),**
  - **Filtrate Tank (No. 05-TK-027)**

Exhausts to the No. 2 Fiberline Bleaching countercurrent packed tower-type wet scrubber (ID No. 05-CD-017-01).

Minerals Removal Process (MRP, ID No. G05073)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous air pollutants	**Affected Sources: G05012 and G05013** See Section 2.2 C.1[a]	15A NCAC 02D .1111 (40 CFR Part 63, Subpart S)
Toxic air pollutants	**Affected Sources: G05073** State Enforceable Only (See Section 2.3 A)	15A NCAC 02D .1100

[a]The Eo stages are not required to be controlled for MACT compliance.

CHLORINE DIOXIDE PREPARATION (AREA 06)

F. Chlorine dioxide generation system (ID No. G06014):

- **R-8 Chlorine Dioxide Generator (ID No. 06-PU-002)**
- **Three Chlorine Dioxide Solution Storage Tanks (Nos. 06-TK-007, 06-TK-008, and 06-TK-009) – 125,000 gallons capacity, each**

Primary Operating Scenario
Two scrubbers in series:

- **One two-section packed tower wet scrubber (ID No. 06-CD-002-01)**
- **No. 1 Hardwood Fiberline Bleaching System countercurrent packed tower-type wet scrubber (ID No. 05-CD-002-01)**

Alternate Operating Scenario

- **One two-section packed tower wet scrubber (ID No. 06-CD-002-01)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulations
Hazardous air pollutants	112(r) - Prevention of accidental releases.	15A NCAC 02Q .0508(h)
Toxic air pollutants	State Enforceable Only (See Section 2.3 A)	15A NCAC 02D .1100

1. 15A NCAC 02D .2100: RISK MANAGEMENT PROGRAM – SECTION 112(r) OF THE CLEAN AIR ACT

a. The Permittee is subject to Section 112(r) of the Clean Air Act and shall comply with all applicable requirements in accordance with 40 CFR Part 68 [15A NCAC 02D .2103].

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

b. Chlorine dioxide emissions from the Chlorine Dioxide System **(ID No. G06014)** shall be controlled by the wet scrubber **(ID No. 06-CD-002-01)** either in series with the No. 1 Hardwood Fiberline Bleaching System wet scrubber **(ID No. 05-CD-002-01)** or alone. To ensure compliance, the Permittee shall perform inspections and maintenance. As a minimum, the inspection and maintenance requirement must include the following:
   i. a monthly external visual inspection (for each calendar month, not to exceed 6 weeks from the previous inspection) of the system ductwork and material collection unit for leaks; and
   ii. an annual internal inspection (for each calendar year, not to exceed 14 months from the previous inspection) of the wet scrubber's structural integrity.
   iii. inspection of the wet scrubber spray nozzles to detect clogging or corrosion damage of nozzles and perform maintenance and repair when necessary to ensure proper operation of the scrubber;
   iv. inspection of packing material to ensure proper packing depth and to check for clogging; and
   v. inspection, cleaning, and calibration of all instrumentation associated with the wet scrubber.
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .2100 if the wet scrubber **(ID No. 06-CD-002-01)** is not inspected and maintained.

c. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. the results of any maintenance performed on the wet scrubber; and
   iv. any corrections made.
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .2100 if the results of inspections and maintenance records are not maintained.

d. The Permittee submitted a Risk Management Plan (RMP) to EPA pursuant to 40 CFR Part 68.150 on June 13, 2014.

e. The Permittee shall revise and update the RMP submitted on June 13, 2014, under 40 CFR 68.150 at least once every five years after that date or most recent update required by 40 CFR 68.190(b)(2) through (b)(7), whichever is later.

f. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

EVAPORATORS (AREA 07)

G. Black Liquor Evaporator System (ID No. G07016):

- **Swenson Countercurrent Evaporator, consisting of six effects and one concentrator (No. 07-PU-002);**
- **Swenson Evaporator Hotwell – collects condensates from the 4th, 5th, and 6th evaporator effects (No. 07-TK-006)**
- **West GB Countercurrent Evaporator, consisting of six effects and steam liquor heater (No. 07-PU-003)**
- **West GB Evaporator Hotwell – collects condensates from the 2nd through 6th evaporator effects (No. 07-TK-007)**

Gases are collected via the NCG closed collection system and burned in the No. 4 Lime Kiln (ID No. G09028, primary) or No. 5 Lime Kiln (ID No. G09029, backup). Foul condensates are collected in a closed collection system and treated in the Foul Condensate System (ID No. G07018).

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Total reduced sulfur	5 ppm (as H_2S) by volume on a dry basis	15A NCAC 02D .0528
Hazardous air pollutants	See Section 2.2 C.1	15A NCAC 02D .1111 (40 CFR Part 63, Subpart S)
Toxic air pollutants	State Enforceable Only (See Section 2.3 A)	15A NCAC 02D .1100

1. 15A NCAC 02D .0528: TOTAL REDUCED SULFUR FROM KRAFT PULP MILLS

a. The emissions of total reduced sulfur shall not exceed five parts per million from the two black liquor evaporator systems **(ID No. G07016)**, measured as hydrogen sulfide on a dry gas basis and averaged per discrete contiguous 12-hour time period.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 G.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0528

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

c. Except as allowed under Section 2.2 C.1.c, the black liquor evaporator systems **(ID No. G07016)**, shall comply with the limitation above by ensuring the gases are combusted in the No. 4 Lime Kiln **(ID No. G09028)** or the No. 5 Lime Kiln **(ID No. G09029)**. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0528 if the gases are not combusted in the Nos. 4 or 5 Lime Kilns.

d. The Permittee shall follow the closed-vent inspection procedures per Section 2.2 C.1 to ensure that the emissions are routed to either the No. 4 Lime Kiln **(ID No. G09028)** or No. 5 Lime Kiln **(ID No. G09029)** as specified above. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0528 if these procedures are not followed or if the records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

H. Weak Black Liquor Storage (ID No. G07086)

- **Eight Storage Tanks (Nos. 07-TK-004, 07-TK-013, 07-TK-016, 07-TK-017, 07-TK-018, 07-TK-019, 07-TK-020, 07-TK-021)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulations
Toxic air pollutants	State Enforceable Only (See Section 2.3 A)	15A NCAC 02D .1100

I. Heavy Black Liquor Storage (ID No. G07019)

- **East Storage Tank (No. 07-TK-023)**
- **West Storage Tank (No. 07-TK-024)**
- **Red Liquor Tank (No. 07-TK-022)**
- **Backup Tank (No. 07-TK-025)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulations
Toxic Air Pollutants	State Enforceable Only (See Section 2.3 A)	15A NCAC 02D .1100

J. Foul Condensate System (ID No. G07018):

- **Condensate Stripper (ID No. 07-PU-015),**
- **Stripper Feed Tank (ID No. 07-TK-011),**
- **Reflux Tank (ID No. 07-TK-014).**

Gases are collected via the NCG closed collection system and burned in the No. 5 Lime Kiln (ID No. G09029, primary) or No. 4 Lime Kiln (ID No. G09028, backup). Foul condensates are collected from the Digester Area (ID No. G02004), the Evaporator System (ID No. G07016), and the Turpentine Recovery Systems (ID Nos. G20060 and G20062).

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulations
Total reduced sulfur	5 ppm by volume on a dry basis, corrected to 10 percent oxygen	15A NCAC 02D .0524 (40 CFR Part 60, Subpart BB)
Hazardous air pollutants	See Section 2.2 C.1	15A NCAC 02D .1111 (40 CFR Part 63, Subpart S)
Toxic air pollutants	State Enforceable Only (See Section 2.3 A)	15A NCAC 02D .1100

1. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR 60 SUBPART BB)

a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR Part 60, Subpart BB, including Subpart A "General Provisions."

Emissions Limitations [15A NCAC 02D .0524]

b. The Permittee shall not cause to be discharged into the atmosphere any gases from the foul condensate system **(ID No. G07018)** which contain TRS in excess of 5 ppm by volume on a dry basis, corrected to 10 percent oxygen, unless the gases are burned with other waste gases in the No. 5 Lime Kiln **(ID No. G09029, primary)** or No. 4 Lime Kiln **(ID No. 09028, backup)**, and are subjected to a minimum temperature of 650^{O}C (1200^{O}F) for at least 0.5 second [40 CFR 60.283(a)(1)].

Monitoring [15A NCAC 02Q .0508(f) and 02D .0524]

c. The Permittee shall follow the closed-vent inspection procedures per Section 2.2 C.1 to ensure that the emissions from the Foul Condensate System **(ID No. G07018)** are routed to the No. 5 Lime Kiln **(ID No. G09029, primary)** or the No. 4 Lime Kiln **(ID No. G09028, backup)**, as specified in Section 2.1 J.1.b, above. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these procedures are not followed or if the records are not maintained.

d. The Permittee shall calibrate, maintain, and operate a monitoring device for measuring the combustion temperature at the point of incineration of effluent gases in the No. 5 Lime Kiln **(ID No. G09029)** and the No. 4 Lime Kiln **(ID No. G09028)** to ensure the minimum temperature as specified in Section 2.1 J.1.b, above, is maintained [40 CFR 60.284(b)(1)]. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these monitoring procedures are not followed.

Reporting/ Recordkeeping [15A NCAC 02Q .0508(f) and 02D .0524]

e. The Permittee shall follow 40 CFR 60.284(d) for reporting of excess emissions.

f. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

RECOVERY (AREA 08)

K. No. 10 Recovery Furnace (ID No. G08020-08-PU-001) – equipped with one 3-chamber, 6-field wet-bottom electrostatic precipitator (ID No. 08-CD-001-01).

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	3.0 lb per ton of air dried pulp	15A NCAC 02D .0508
Sulfur dioxide	2.3 lb per million Btu heat input Monitoring Requirements	15A NCAC 02D .0516 15A NCAC 02D .0608
Total reduced sulfur	5 ppm (as H_2S) by volume on a dry basis, corrected to 8 percent oxygen	15A NCAC 02D .0528
Particulate matter	Compliance assurance monitoring	15A NCAC 02D .0614
Carbon monoxide and Volatile organic compounds	Annual recordkeeping and reporting of actual emissions (See Section 2.2 A.3)	15A NCAC 02D .0530(u)
Visible emissions Hazardous air pollutants	See Section 2.2 D	15A NCAC 02D .1111 40 CFR Part 63, Subpart MM
Toxic air pollutants	State Enforceable Only (See Section 2.3 A)	15A NCAC 02D .1100

1. 15A NCAC 02D .0508: PARTICULATES FROM PULP AND PAPER MILLS

a. Emissions from the production of pulp and paper that are discharged from the No. 10 Recovery Furnace **(ID No. G08020)** into the atmosphere shall not exceed 3.0 pounds of particulate matter per equivalent tons of air dried pulp.

Testing [15A NCAC 02Q .0508(f)]

b. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit(s) above by testing the No. 10 Recovery Furnace **(ID No. G08020)** annually for particulate matter in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in General Condition JJ. If the results of the testing demonstrate that emissions are less than 80 percent of the limit in Section 2.1 K.1.a, above, the testing frequency may be reduced to every two years. If the results of this or any test are above the limit given in Section 2.1 K.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0508 and the Permittee shall resume performance testing on an annual basis, beginning no more than 12 months after the previous test.

Monitoring/ Recordkeeping/ Reporting [15A NCAC 02Q .0508(f), 40 CFR 70.6(a)(3)(A)]

c. Particulate matter emissions from the No. 10 Recovery Furnace **(ID No. G08020)** shall be controlled by an electrostatic precipitator (ESP) (ID No. 08-CD-001-01). To ensure compliance with the particulate emission limit in Section 2.1 K.1.a, above, the Permittee shall follow the 40 CFR Part 63, Subpart MM monitoring, recordkeeping, and reporting requirements as specified in Section 2.2 D. Excess emissions shall be in reported in accordance with 15A NCAC 02D .0535 as outlined in General Condition I. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0508 if either (1) the applicable MACT Subpart MM requirements above are not monitored and recorded; or (2) the MACT Subpart MM monitoring determines a violation of the applicable PM emission standard per 40 CFR 63.864(k)(2) as detailed above.

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES
15A NCAC 02D .0608: OTHER LARGE COAL OR RESIDUAL OIL BURNERS

a. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 K.2.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f), and 02D .0608]

c. No monitoring/recordkeeping is required for sulfur dioxide emissions from the firing of natural gas/No. 2 fuel oil in this Recovery Furnace **(ID No. G08020)**.

d. To ensure compliance with Section 2.1 K.2.a, the Permittee shall monitor the sulfur content and heat content of the No. 6 fuel oil by using fuel oil supplier certification per month. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) and include the following information:
   i. the name of the fuel oil supplier; and
   ii. a statement verifying that the methods used to determine the maximum sulfur content of the fuel oil was in accordance with the following:
      (A) sample collection – ASTM D4177 or D4057;
      (B) heat of combustion (Btu) – ASTM D240 or D4868; and
      (C) sulfur content – ASTM D129, D-4294, or D1552.
   iii. the maximum sulfur content of the fuel oil received during the month;
   iv. the average heat content of the fuel oil received during the month; and
   v. a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the fuel oil fired during the period.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 and 02D .0608 if the results of the fuel oil supplier certifications are not monitored and recorded.

e. The Permittee shall calculate and record in a logbook (written or electronic format) the pounds of sulfur dioxide per million Btu heat content of the fuel oil per month using the above information. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 and 02D .0608 if the requirements above are not monitored and recorded or if the results show an exceedance of the limit given in Section 2.1 K.2.a, above.

Reporting [15A NCAC 02Q .0508(f) and 02D .0608]

f. No reporting is required for sulfur dioxide emissions from the firing of natural gas/No. 2 fuel oil in this Recovery Furnace **(ID No. G08020)**.

g. The Permittee shall submit a summary report of the fuel oil supplier certifications and calculated emission rates postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 02D .0528: TOTAL REDUCED SULFUR FROM KRAFT PULP MILLS

a. The emissions of total reduced sulfur from the No. 10 Recovery Furnace **(ID No. G08020)** shall not exceed 5 parts per million corrected to 8 percent oxygen, measured as hydrogen sulfide on a dry gas basis and averaged per discrete contiguous 12-hour time period. [15A 02D .0528(c)(1)]

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 K.3.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0528.

Monitoring [15A NCAC 02Q .0508(f)]

c. To ensure compliance, the Permittee shall calibrate, maintain, and operate a continuous monitoring system for determining the total reduced sulfur (as hydrogen sulfide, dry basis, corrected to 8 percent oxygen) emissions discharged to the atmosphere and record the output of the system. The continuous monitoring system shall be operated in accordance with the applicable performance specifications in 40 CFR Part 60, Appendix B and quality assurance procedures in 40 CFR Part 60, Appendix F, Section 3, unless an alternative monitoring and quality assurance program is approved by the DAQ. The monitoring system downtime shall not exceed 5 percent. If any 12-hour block average exceeds the limit above or the records are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0528, except that one percent of all 12-hour total reduced sulfur averages

per quarter year in excess of the limitation given above, in the absence of start-ups, shutdowns, and malfunctions, shall not be considered in violation.

Reporting [15A NCAC 02Q .0508(f)]

d. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 02D .0614: COMPLIANCE ASSURANCE MONITORING

a. For the electrostatic precipitator **(ID No. 08-CD-001-01)** associated with the No. 10 Recovery Furnace **(ID No. G08020)**, the Permittee shall comply with 40 CFR part 64 pursuant to 15A NCAC 02D .0614 to ensure that the recovery furnace complies with the emission limits of 15A NCAC 02D .0508.

Background

b. Emission Units: No. 10 Recovery Furnace **(ID No. G08020)**

c. Applicable Regulation, Emission Limitation, and Monitoring Requirements
   i. Regulation: 15A NCAC 02D .0508: Particulates from Pulp and Paper Mills
   ii. Emission Limits:
   PM: 3.0 pounds of particulate matter per equivalent tons of air dried pulp.
   iii. Control Technology: Electrostatic precipitator (ESP)

Monitoring Approach

d. The key elements of the monitoring approach for particulate matter, including parameters to be monitored, parameter ranges and performance criterial are presented in the following table.

Measure	Indicator
I. Indicator	Opacity of ESP exhaust
Measuring approach	Continuous opacity monitoring system (COMS) in ESP exhaust
II. Indicator Range	The opacity indicator range is a 1-hour average opacity of 20 percent. An excursion occurs when any 1-hour average opacity is greater than 20 percent. The excursion triggers corrective action and reporting requirement. The QIP threshold is when the total duration of excursions is greater than 5 percent of the source operating time during any 6-month period. The QIP shall be prepared as required under 40 CFR 64.8.
III. Performance Criteria	
Data Representativeness	The COMS was installed at a representative location in the recovery furnace ESP exhaust stack per 40 CFR 60, Appendix B, Performance Specification (PS-1)
QA/QC Practices and Criteria	The COMS was initially installed and evaluated per PS-1. Zero and span drift are checked daily and a quarterly filter audit is performed.
Monitoring Frequency	The opacity of the ESP exhaust is monitored continuously (every 10 seconds)
Data Collection Procedures	The data acquisition system shall retain all 6-minute data and 3-hour block averages according to PS-1.
Averaging Period	The 10-second opacity data are used to calculate the 6-minute averages. The 6-minute averages are used to calculate the 3-hour block average.

Reporting [15A NCAC 02Q .0508(f) and 40 CFR 64.9(a)]

e. The Permittee shall submit a summary report of all monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. In addition, the summary report shall contain the following information, as applicable:
   i. Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
   ii. Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
   iii. A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the Permittee shall include, in the next summary report, documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances.

L. No. 11 Recovery Furnace (ID No. G08021-08-PU-002) – equipped with one 3-chamber, 4-field wet bottom design electrostatic precipitator (ID No. 08-CD-002-01)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	3.0 lb per ton of air dried pulp	15A NCAC 02D .0508
Visible emissions	35 percent opacity	15A NCAC 02D .0508
Sulfur dioxide	2.3 lb per million Btu heat input Monitoring Requirements	15A NCAC 02D .0516 15A NCAC 02D .0608
Total reduced sulfur	5 ppm (as H_2S) by volume on a dry basis, corrected to 8 percent oxygen	15A NCAC 02D .0528
Particulate matter	Compliance assurance monitoring	15A NCAC 02D .0614
Carbon monoxide and Volatile organic compounds	Annual recordkeeping and reporting of actual emissions (See Section 2.2 A.3)	15A NCAC 02D .0530(u)
Visible emissions Hazardous air pollutants	See Section 2.2 D	15A NCAC 02D .1111 40 CFR Part 63, Subpart MM
Toxic air pollutants	State Enforceable Only (See Section 2.3 A)	15A NCAC 02D .1100

1. 15A NCAC 02D .0508: PARTICULATES FROM PULP AND PAPER MILLS

a. Emissions from the production of pulp and paper that are discharged from the No. 11 Recovery Furnace **(ID No. G08021)** into the atmosphere shall not exceed:
   i. 3.0 pounds of particulate matter per equivalent tons of air dried pulp, and
   ii. Visible emissions shall not be more than 35 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 35 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 89 percent opacity.

Testing [15A NCAC 02Q .0508(f)]

b. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit(s) above by testing the No. 11 Recovery Furnace **(ID No. G08021)** annually for particulate matter in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in General Condition JJ. If the results of the testing demonstrate that emissions are less than 80 percent of the limit in Section 2.1 L.1.a, above, the testing frequency may be reduced to every two years. If the results of this or any test are above the limit given in Section 2.1 L.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0508 and the Permittee shall resume performance testing on an annual basis, beginning no more than 12 months after the previous test.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f), 40 CFR 70.6(a)(3)(A)]

c. Particulate matter emissions from the No. 11 Recovery Furnace **(ID No. G08021)** shall be controlled by an electrostatic precipitator (ESP) **(ID No. 08-CD-001-01)**. To ensure compliance with the particulate matter emission limit in Section 2.1 L.1.a.i, above, the Permittee shall follow the 40 CFR Part 63, Subpart MM monitoring, recordkeeping, and reporting requirements as specified in Section 2.2 D. Excess emissions shall be in reported in accordance with 15A NCAC 02D .0535 as outlined in General Condition I. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0508 if either (1) the applicable MACT Subpart MM requirements above are not monitored and recorded or (2) the MACT Subpart MM monitoring determines a violation of the applicable PM emission standard per 63.864(k)(2) as detailed above.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f), 40 CFR 70.6(a)(3)(A)]

d. To determine compliance with the opacity limits in condition 2.1 L.1.a.ii, the Permittee shall follow the 40 CFR 63, Subpart MM continuous opacity monitoring system (COMS) monitoring requirements as specified in Section 2.2 D to monitor and record opacity. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0508 if the monitoring is not performed, if the monitored values exceed the limitations given above, or if the records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit a summary report of the monitoring data postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES
15A NCAC 02D .0608: OTHER LARGE COAL OR RESIDUAL OIL BURNERS

a. Emissions of sulfur dioxide from the No. 11 Recovery Furnace **(ID No. G08021)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 L.2.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 and 02D .0608.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f), and 02D .0608]

c. No monitoring/recordkeeping is required for sulfur dioxide emissions from the firing of natural gas/No. 2 fuel oil in this Recovery Furnace **(ID No. G08021)**.

d. To ensure compliance with Section 2.1 L.2.a, the Permittee shall monitor the sulfur content and heat content of the No. 6 fuel oil by using fuel oil supplier certification per month. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) and include the following information:
   i. the name of the fuel oil supplier; and
   ii. a statement verifying that the methods used to determine the maximum sulfur content of the fuel oil was in accordance with the following:
      (A) sample collection – ASTM D4177 or D4057;
      (B) heat of combustion (Btu) – ASTM D240 or D4868; and
      (C) sulfur content – ASTM D129, D-4294, or D1552.
   iii. the maximum sulfur content of the fuel oil received during the month;
   iv. the average heat content of the fuel oil received during the month; and
   v. a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the fuel oil fired during the period.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 and 02D .0608 if the results of the fuel oil supplier certifications are not monitored and recorded.

e. The Permittee shall calculate and record in a logbook (written or electronic format) the pounds of sulfur dioxide per million Btu heat content of the fuel oil per month using the above information. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 and 02D .0608 if the requirements above are not monitored and recorded or if the results show an exceedance of the limit given in Section 2.1 L.2.a, above.

Reporting [15A NCAC 02Q .0508(f) and 02D .0608]

f. No reporting is required for sulfur dioxide emissions from the firing of natural gas/No. 2 fuel oil in this Recovery Furnace **(ID No. G08021)**.

g. The Permittee shall submit a summary report of the fuel oil supplier certifications and calculated emission rates postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 02D .0528: TOTAL REDUCED SULFUR FROM KRAFT PULP MILLS

a. The emissions of total reduced sulfur from the No. 11 Recovery Furnace (**ID No. G08021**) shall not exceed 5 parts per million corrected to 8 percent oxygen, measured as hydrogen sulfide on a dry gas basis and averaged per discrete contiguous 12-hour time period.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 L.3.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0528.

Monitoring [15A NCAC 02Q .0508(f)]

c. To ensure compliance, the Permittee shall calibrate, maintain, and operate a continuous monitoring system for determining the total reduced sulfur (as hydrogen sulfide, dry basis, corrected to 8 percent oxygen) emissions discharged to the atmosphere and record the output of the system. The continuous monitoring system shall be operated in accordance with the applicable performance specifications in 40 CFR Part 60 Appendix B and quality assurance procedures in 40 CFR Part 60, Appendix F, Section 3, unless an alternative monitoring and quality assurance program is approved by the DAQ. The monitoring system downtime shall not exceed 5 percent. If any 12-hour block average exceeds the limit above or the records are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0528, except that one percent of all 12-hour total reduced sulfur averages per quarter year in excess of the limitation given above, in the absence of start-ups, shutdowns, and malfunctions, shall not be considered in violation.

Reporting [15A NCAC 02Q .0508(f)]

d. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 02D .0614: COMPLIANCE ASSURANCE MONITORING

a. For the electrostatic precipitator **(ID No. 08-CD-002-01)** associated with the No. 11 Recovery Furnace **(ID No. G08021)**, the Permittee shall comply with 40 CFR part 64 pursuant to 15A NCAC 02D .0614 to ensure that the recovery furnace complies with the emission limits of 15A NCAC 02D .0508.

Background

b. Emission Units: No. 11 Recovery Furnace **(ID No. G08021)**

c. Applicable Regulation, Emission Limitation, and Monitoring Requirements
   i. Regulation: 15A NCAC 02D .0508: Particulates from Pulp and Paper Mills
   ii. Emission Limits:
   PM: 3.0 pounds of particulate matter per equivalent tons of air dried pulp.

   iii. Control Technology: Electrostatic precipitator (ESP)

Monitoring Approach

d. The key elements of the monitoring approach for particulate matter, including parameters to be monitored, parameter ranges and performance criterial are presented in the following table.

Measure	Indicator
I. Indicator	Opacity of ESP exhaust
Measuring approach	Continuous opacity monitoring system (COMS) in ESP exhaust
II. Indicator Range	The opacity indicator range is a 1-hour average opacity of 20 percent. An excursion occurs when any 1-hour average opacity is greater than 20 percent. The excursion triggers corrective action and reporting requirement. The QIP threshold is when the total duration of excursions is greater than 5 percent of the source operating time during any 6-month period. The QIP shall be prepared as required under 40 CFR 64.8.

Measure	Indicator
III. Performance Criteria	
Data Representativeness	The COMS was installed at a representative location in the recovery furnace ESP exhaust stack per 40 CFR 60, Appendix B, Performance Specification (PS-1)
QA/QC Practices and Criteria	The COMS was initially installed and evaluated per PS-1. Zero and span drift are checked daily and a quarterly filter audit is performed.
Monitoring Frequency	The opacity of the ESP exhaust is monitored continuously (every 10 seconds)
Data Collection Procedures	The data acquisition system shall retain all 6-minute data and 3-hour block averages according to PS-1.
Averaging Period	The 10-second opacity data are used to calculate the 6-minute averages. The 6-minute averages are used to calculate the 3-hour block average.

Reporting [15A NCAC 02Q .0508(f) and 40 CFR 64.9(a)]

e. The Permittee shall submit a summary report of all monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. In addition, the summary report shall contain the following information, as applicable:
   i. Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
   ii. Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
   iii. A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the Permittee shall include, in the next summary report, documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances.

M. Black liquor oxidation system (ID No. G08022):

- **Black liquor oxidation (No. 08-PU-005) – equipped with three cyclones, one on each oxidizer tank (ID No. CD-BLO) followed by one natural gas-fired regenerative thermal oxidizer (4.2 million Btu per hour heat input, ID No. CD-BLOXRTO) and one caustic scrubber (ID No. CD-RTOSCR)**

NOTE: Only two of the three oxidizer tanks are required to operate if one of the recovery furnaces is down

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur dioxide	Less than 40 tons per consecutive twelve-month period	15A NCAC 02Q .0317 (15A NCAC 02D .0530 Avoidance)
Sulfuric acid	Less than 7 tons per consecutive twelve-month period	15A NCAC 02Q .0317 (15A NCAC 02D .0530 Avoidance)
Hazardous air pollutants	See Section 2.2 C.2	15A NCAC 02D .1111 (40 CFR Part 63, Subpart S) via Equivalency by Permit (EBP) [40 CFR 63.94]
Toxic air pollutants	State Enforceable Only (See Section 2.3 A)	15A NCAC 02D .1100

1. 15A NCAC 02Q. 0317: AVOIDANCE CONDITIONS for
15A NCAC 02D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. In order to avoid applicability of 15A NCAC 02D .0530(g) for major sources and major modifications, the BLOX System **(ID No. G08022)** shall discharge into the atmosphere:
   i. less than 40 tons per consecutive twelve-month period of sulfur dioxide; and
   ii. less than 7 tons per consecutive twelve-month period of sulfuric acid.

b. To ensure that emissions are less than the above-specified limits, the Black Liquor Oxidation System thermal oxidizer (ID No. CD-BLOXRTO) is permitted to burn only BLOX gases and natural gas as an auxiliary fuel.

Testing [15A NCAC 02Q .0508(f)]

c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in Section 2.1 M.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

Monitoring/ Recordkeeping [15A NCAC 02Q .0508(f)]

d. Sulfur dioxide and sulfuric acid emissions from the BLOX system **(ID No. G08022)** shall be controlled by the RTO scrubber **(ID No. CD-RTOSCR)**. To ensure compliance, the Permittee shall install, calibrate, operate, and maintain a pH indicator and a scrubbing liquid flow meter on the RTO scrubber. These parameters shall be recorded once per day. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If the emission source(s) is not operating, a record of this fact along with the corresponding date and time shall substitute for the daily observation. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these parameters are not monitored or the records are not maintained.

e. The Permittee shall monitor the following parameters daily for values outside the normal operating range, as specified:
   i. The pH shall be greater than or equal to 8.0 standard units; and
   ii. The scrubbing liquid flow rate shall be greater than or equal to 400 gallons per minute.
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these parameters are not monitored.

f. The Permittee shall calculate the sulfur dioxide emissions from the BLOX System **(ID No. G08022)** on a monthly basis to ensure compliance with the limits given in Section 2.1 M.1.a, above. The RTO scrubber is required to be operated only as necessary to achieve compliance with the limitations above. Sulfur dioxide emissions shall be determined by the following:

i. When the RTO Scrubber is operating within the monitoring parameter values established above, the sulfur dioxide emissions shall be calculated by multiplying the total amount of operating time by the maximum controlled emission factor of 0.5 pounds per hour;
ii. When the RTO Scrubber is not in operation or is not operating within the monitoring parameter values established above, the sulfur dioxide emissions shall be calculated by multiplying the total amount of operating time by the maximum uncontrolled emission factor of 25 pounds per hour; and
iii. When the thermal oxidizer **(ID No. CD-BLOXRTO)** is not in operation, the RTO scrubber is not required and the sulfur dioxide emissions are zero.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the amounts of sulfur dioxide emissions are not calculated and recorded.

g. Calculations and the total amount of sulfur dioxide emissions from the BLOX System **(ID No. G08022)** shall be recorded monthly in a logbook (written or electronic format), maintained on-site and made available to officials of the Division of Air Quality, upon request. The Permittee must keep each entry in the log and all required records on file for a minimum of five years. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the sulfur dioxide emissions exceed the limit in Section 2.1 M.1.a, above, or if the records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

h. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The report shall contain the monthly sulfur dioxide emissions totaled for the previous seventeen months. The emissions shall be calculated for each of the twelve month periods over the previous seventeen months.

N. Two Smelt Dissolving Tanks:

- **No. 10 Smelt Dissolving Tank (ID No. G08023, No. 08-PU-011) – equipped with a chevron mist eliminator (ID No. 08-CD-011-01) in series with a spray tower scrubber (ID No. 08-CD-011-02); and**
- **No. 11 Smelt Dissolving Tank (ID No. G08024, No. 08-PU-012) – equipped with a chevron mist eliminator (ID No. 08-CD-012-01) in series with a spray tower scrubber (ID No. 08-CD-012-02)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	0.6 lb per ton of air dried pulp	15A NCAC 02D .0508
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Total reduced sulfur	0.016 g/kg black liquor solids as H_2S (0.033 lb/ton black liquor solids as H_2S)	15A NCAC 02D .0524 NSPS Subpart BB
Particulate matter	0.1 g/kg black liquor solids (dry weight) [(0.2 lb/ton black liquor solids (dry weight)]	15A NCAC 02D .0524 NSPS Subpart BB
Particulate matter	Compliance assurance monitoring	15A NCAC 02D .0614
Hazardous air pollutants	See Section 2.2 D	15A NCAC 02D .1111 40 CFR Part 63, Subpart MM
Toxic air pollutants	State Enforceable Only (See Section 2.3 A)	15A NCAC 02D .1100

1. 15A NCAC 02D .0508: PARTICULATES FROM PULP AND PAPER MILLS

a. Emissions from the production of pulp and paper that are discharged from the Nos. 10 and 11 Smelt Dissolving Tanks **(ID Nos. G08023 and G08024)** into the atmosphere shall not exceed 0.6 pounds of particulate matter per equivalent tons of air dried pulp.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 N.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0508.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f), 40 CFR 70.6(a)(3)(A)]

c. Particulate matter emissions from the No.10 Smelt Dissolving Tank (**ID No. G08023**) shall be controlled by a chevron mist eliminator in series with a spray tower scrubber **(ID No. 08-CD-011-01)**. Particulate matter emissions from the No.11 Smelt Dissolving Tank **(ID No. G08024)** shall be controlled by a chevron mist eliminator in series with a spray tower scrubber **(ID No. 08-CD-012-01)**. To ensure compliance with the particulate emission limit in Section 2.1 N.1.a, above, the Permittee shall follow the 40 CFR Part 63, Subpart MM monitoring, recordkeeping and reporting requirements as specified in Section 2.2 D. Excess emissions shall be in reported in accordance with 15A NCAC 02D .0535 as outlined in General Condition I. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0508 if either (1) the applicable MACT Subpart MM requirements above are not monitored and recorded or (2) the MACT Subpart MM monitoring determines a violation of the applicable PM emission standard per 63.864(k)(2) as detailed above.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from the No. 10 Smelt Dissolving Tank **(ID No. G08023)** and the No. 11 Smelt Dissolving Tank **(ID No. G08024)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in Section 2.1 N.2.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

c. To ensure compliance, once a week the Permittee shall observe the emission points of the No. 10 Smelt Dissolving Tank and No. 11 Smelt Dissolving Tank **(ID Nos. G08023 and G08024)** for any visible emissions above normal. The weekly observation must be made for each week of the calendar year period to ensure compliance with the requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 N.2.a, above.

   If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 02D .0524: NSPS 40 CFR SUBPART BB

a. For the Nos. 10 and 11 Smelt Dissolving Tanks **(ID Nos. G08023 and G08024)**, the Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60, Subpart BB, including Subpart A "General Provisions."

Emissions Limitations [15A NCAC 02D .0524]

b. The Permittee shall not discharge into the atmosphere from the Nos. 10 and 11 Smelt Dissolving Tanks **(ID Nos. G08023 and G08024)** any gases which contain:
   i. particulate matter in excess of 0.1 g/kg black liquor solids (dry weight) [(0.2 lb/ton black liquor solids (dry weight)][40 CFR Part 60, Subpart 60.282(a)(2)]; or
   ii. TRS in excess of 0.016 g/kg black liquor solids TRS as H2S (0.033 lb/ton black liquor solids TRS as H2S) [40 CFR Part 60, Subpart 60.283(a)(4)].

Testing [15A NCAC 02Q .0508(f)]

c. The Permittee shall demonstrate compliance with the emission limit(s) above by testing the Nos. 10 and 11 Smelt Dissolving Tanks **(ID Nos. G08023 and G08024)** in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in General Condition JJ. Testing shall be completed once per calendar year and the results submitted to the DAQ. If the results of the testing demonstrate results at less than 80 percent of the limit above, the testing frequency may be reduced to every five years. If the results of this or any test is above the limit given in Section 2.1 N.3.b, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

Monitoring/Recordkeeping [15A NCAC 02D .0524]

d. Particulate matter emissions from the reconstructed Nos. 10 and 11 Smelt Dissolving Tanks **(ID Nos. G08023 and G08024)** shall be controlled by the spray tower/chevron mist eliminator control system installed on each smelt dissolving tank **(ID Nos. 08-CD-011-01 and CD-012-01)** as described above. To ensure compliance, the Permittee shall install, calibrate, maintain, and operate the following continuous monitoring systems: [40 CFR 60.284(b)(2)]
   i. A monitoring device for the continuous measurement of the pressure loss of the gas stream through the control equipment. The monitoring device shall be certified by the manufacturer to be accurate to within a gauge pressure of ±500 Pascals (ca. ±2 inches water gauge pressure), and
   ii. A monitoring device for the continuous measurement of the scrubbing liquid supply pressure to the control equipment. The monitoring device shall be certified by the manufacturer to be accurate within ±15 percent of design scrubbing liquid supply pressure. The pressure sensor or tap is to be located close to the scrubber liquid discharge point. The Administrator may be consulted for approval of alternative locations.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the particulate matter emissions are not controlled as required above.

e. The Permittee shall record the results of these measurements at least once per shift. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these parameters are not monitored or these records are not maintained.

f. The Permittee shall establish operating ranges and otherwise operate and control the emissions from the Nos. 10 and 11 Smelt Dissolving Tanks **(ID Nos. G08023 and G08024)** in accordance with the procedures in Section 2.2 D.1.g through D.1.h. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if any of these operating parameters are outside the parameter values in Table 2.2 D-2 of Section 2.2 D.1.

Reporting [15A NCAC 02D .0524]

g. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 02D .0614: COMPLIANCE ASSURANCE MONITORING

a. For the chevron mist eliminators **(ID Nos. 08-CD-011-01 and 08-CD-012-01)** and spray tower scrubbers **(ID Nos. 08-CD-011-02 and 08-CD-012-02)** associated with the Nos. 10 and 11 Smelt Dissolving Tanks **(ID No. G08023 and G08024)**, respectively, the Permittee shall comply with 40 CFR part 64 pursuant to 15A NCAC 02D .0614 to ensure that the smelt dissolving tanks comply with the emission limits of 15A NCAC 02D .0508.

Background

b. Emission Units: No. 10 Smelt Dissolving Tank **(ID No. G08023)**
   No. 11 Smelt Dissolving Tank **(ID No. G08024)**

c. Applicable Regulation, Emission Limitation, and Monitoring Requirements:
   i. Regulation: 15A NCAC 02D .0508: Particulates from Pulp and Paper Mills
   ii. Emission Limits:
   PM: 0.6 pounds of particulate matter per equivalent tons of air dried pulp.

   iii. Control Technology: chevron mist eliminator
   spray tower scrubber

Monitoring Approach

d. The key elements of the monitoring approach for particulate matter, including parameters to be monitored, parameter ranges and performance criterial are presented in the following table.

Measure	Indicator	
	No. 10 Smelt Dissolving Tank	**No. 11 Smelt Dissolving Tank**
I. Indicator	Scrubber pressure drop and total liquid injection rate (firing floor plus demister)	Scrubber pressure drop and total liquid injection rate (firing floor plus demister)

Measure	Indicator	
	No. 10 Smelt Dissolving Tank	**No. 11 Smelt Dissolving Tank**
Measuring approach	Install pressure drop and flow rate continuous monitors	Install pressure drop and flow rate continuous monitors
II. Indicator Range[a]	Pressure drop indicator range: minimum 3-hour average of 0.12 inches of H_2O Liquid injection rate indicator range: minimum 3-hour average 30 gallons per minute An excursion occurs when the 3-hour average measurement is less than the indicator range. The excursion triggers corrective action and reporting requirement. No more than one excursion will be attributed in any given 24-hour period. The QIP threshold is a total of 6 excursions during any 6-month period. The QIP shall be prepared as required under 40 CFR 64.8.	Pressure drop indicator range: minimum 3-hour average of 1.50 inches of H_2O Liquid injection rate indicator range: minimum 3-hour average 74 gallons per minute An excursion occurs when the 3-hour average measurement is less than the indicator range. The excursion triggers corrective action and reporting requirement. No more than one excursion will be attributed in any given 24-hour period. The QIP threshold is a total of 6 excursions during any 6-month period. The QIP shall be prepared as required under 40 CFR 64.8.
III. Performance Criteria		
Data Representativeness	Pressure drop tabs installed before and after the scrubber. Flow measurement devices located prior to liquid injection point.	Pressure drop tabs installed before and after the scrubber. Flow measurement devices located prior to liquid injection point.
QA/QC Practices and Criteria	Annual calibration of pressure drop and flow monitoring devices.	Annual calibration of pressure drop and flow monitoring devices.
Monitoring Frequency	Continuous pressure drop and flow measurements; minimum of one value every 15 minutes of operating time, excluding periods of monitoring downtime and required QA/QC.	Continuous pressure drop and flow measurements; minimum of one value every 15 minutes of operating time, excluding periods of monitoring downtime and required QA/QC.
Data Collection Procedures	The data acquisition system shall retain all 15-minute data and 3-hour block averages.	The data acquisition system shall retain all 15-minute data and 3-hour block averages.
Averaging Period	The 15-minute pressure drop and liquid injection rate data are used to calculate the 3-hour block average.	The 15-minute pressure drop and liquid injection rate data are used to calculate the 3-hour block average.

[a]During performance testing, the established continuous compliance monitoring parameters shall not apply. Performance tests will serve to provide the monitoring during these periods.

Reporting [15A NCAC 02Q .0508(f) and 40 CFR 64.9(a)]

e. The Permittee shall submit a summary report of all monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. In addition, the summary report shall contain the following information, as applicable:
   i. Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
   ii. Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
   iii. A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the Permittee shall include, in the next summary report, documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances.

LIME PRODUCTION (AREA 09)

O. Two Lime Kilns:

- **No. 4 Lime Kiln (ID No. G09028, No. 09-PU-009) – equipped with propane igniters equipped with a cyclonic mist eliminator in series with a flooded-disc type wet scrubber (ID No. 09-CD-009-01).**
- **No. 5 Lime Kiln (ID No. G09029, No. 09-PU-010) – equipped with propane igniters equipped with one 4-stage MicroMist™ venturi scrubber (ID No. 09-CD-010-01).**

No. 4 Lime Kiln is the primary burner and No. 5 Lime Kiln is backup burner for collected NCG gases from the Digester Area (ID No. G02004), Black Liquor Evaporation System (ID No. G07016), No. 1 Hardwood Turpentine Recovery System (ID No. G20060), and No. 2 Pine Turpentine Recovery System (ID No. G20062); No. 5 Lime Kiln is the primary burner and No. 4 Lime Kiln is backup burner for Stripper Off Gases (SOG) from the Condensate Stripper System (ID No. G07018).

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits / Standards	Applicable Regulation
Particulate matter	0.5 lb per ton of air dried pulp	15A NCAC 02D .0508
Sulfur dioxide	2.3 lb per million Btu heat input	15A NCAC 02D .0516
Visible emissions	40 percent opacity	15A NCAC 02D .0521
Total reduced sulfur	20 ppm by volume on a dry basis, corrected to 10 percent oxygen	15A NCAC 02D .0528
Particulate matter	Compliance assurance monitoring	15A NCAC 02D .0614
Carbon monoxide and Volatile organic compounds	Annual recordkeeping and reporting of actual emission (See Section 2.2 A.3)	15A NCAC 02D .0530(u)
Hazardous air pollutants	See Section 2.2 D	15A NCAC 02D .1111 40 CFR Part 63, Subpart MM

1. 15A NCAC 02D .0508: PARTICULATES FROM PULP AND PAPER MILLS

a. Emissions from the production of pulp and paper that are discharged from the Nos. 4 and No. 5 Lime Kilns (**ID Nos. G09028 and G09029)** into the atmosphere shall not exceed 0.5 pounds of particulate matter per equivalent tons of air dried pulp.

Testing [15A NCAC 02Q .0508(f)]

b. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit(s) above by testing the No. 4 and No. 5 Lime Kilns **(ID Nos. G09028 and G09029)** annually for particulate matter in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in General Condition JJ. If the results of the testing demonstrate that emissions are less than 80 percent of the limit in Section 2.1 O.1.a, above, the testing frequency may be reduced to every two years. If the results of this or any test are above the limit given in Section 2.1 O.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0508 and the Permittee shall resume performance testing on an annual basis, beginning no more than 12 months after the previous test.

Monitoring/Recordkeeping/Reporting[15A NCAC 02Q .0508(f), 40 CFR 70.6(a)(3)(A)]]

c. Particulate matter emissions from the No. 5 Lime Kiln **(ID No. G09029)** shall be controlled by the 4-stage MicroMist™ venturi scrubber **(ID No. 09-CD-010-01)**. To ensure compliance with the particulate emission limit in Section 2.1 O.1.a, above, the Permittee shall follow the 40 CFR Part 63, Subpart MM monitoring, recordkeeping, and reporting requirements as specified in Section 2.2 D.1. Excess emissions shall be reported in accordance with 15A NCAC 02D .0535 as outlined in General Condition I. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0508 if either (1) the applicable MACT Subpart MM requirements above are not monitored and recorded or (2) the MACT Subpart MM monitoring determines a violation of the applicable PM emission standard per 63.864(k)(2) as detailed above.

d. Particulate matter emissions from the No. 4 Lime Kiln **(ID No. G09028)** shall be controlled by the flooded disc-type wet scrubber **(ID No. 09-CD-009-01)**. To ensure compliance with the particulate emission limit in Section 2.1 O.1.a, above, the Permittee shall meet the following:
   i. When the combustion of No. 6 fuel oil provides greater than 50 percent of the heat input to the No. 4 Lime Kiln **(ID No. G09028)**, the Permittee shall follow the 40 CFR Part 63, Subpart MM monitoring, recordkeeping, and reporting requirements as specified in Section 2.2 D.1. Excess emissions shall be reported in accordance with 15A NCAC 02D .0535 as outlined in General Condition I.
   ii. When the combustion of No. 6 fuel oil provides 50 percent or less of the heat input to the No. 4 Lime Kiln **(ID No. G09028)**, the Permittee shall perform inspections and maintenance as recommended by the manufacturer.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0508 if the scrubber is not inspected and maintained.

e. The Permittee shall install, operate, and maintain a pressure drop indicator and a liquid flowmeter on each scrubber.
   i. The Permittee shall operate the No. 5 Lime Kiln scrubber **(ID No. 09-CD-010-01)** according to the Subpart MM requirements in Section 2.2 D.1, below.
   ii. The Permittee shall operate the No. 4 Lime Kiln scrubber **(ID No. 09-CD-009-01)** according to the Subpart MM requirements in Section 2.2 D.1, below, when No. 6 fuel oil combustion provides greater than 50 percent of the heat input to the kiln.
   iii. When No. 6 fuel oil combustion provides 50 percent or less of the heat input to the kiln, the Permittee shall operate the No. 4 Lime Kiln scrubber **(ID No. 09-CD-009-01)** as follows.
      (A) The Permittee shall initially establish operating ranges for pressure drop and liquid flow rate during a performance test conducted within 180 days after the effective date of Permit No. 08961T19. If the Permittee reevaluates compliance with the emission limit in Section 2.1 O.1.a, above, at parameter ranges outside of those listed below, the Permittee shall, upon approval by the DAQ, attach the approval memo containing the revised operating parameters to this permit and maintain the parameters in the associated operating ranges contained therein.
      (B) The Permittee shall continuously monitor and record scrubbing liquid flow rate and pressure drop on a 3-hour average. The scrubber parameter monitoring system downtime shall not exceed two (2) percent of the monitoring time in any semi-annual reporting period. If the emission source is not operating, a record of this fact along with the corresponding date and time shall substitute for the observation. The monitoring systems shall be calibrated annually.
      (C) The pressure drop across the scrubber shall be maintained within the range established during the performance test.
      (D) The scrubber liquid injection rate shall be maintained within the range established during the performance test.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0508 if the pressure drop and liquid flow rate are not established and maintained as required above.

f. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of actions recorded;
   ii. the results of each respective monthly inspection;
   iii. the results of any maintenance performed on the control devices; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0508 if these records are not maintained.

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 O. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0508.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

c. No monitoring/recordkeeping is required for sulfur dioxide emissions from the firing of natural gas in the lime kilns **(ID Nos. G09028 and G09029)**.

d. To ensure compliance with 2.1 O.2.a, the Permittee shall monitor the sulfur content and heat content of the No. 6 fuel oil by using fuel oil supplier certification per month. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) on a quarterly basis and include the following information:
   i. the name of the fuel oil supplier;
   ii. the maximum sulfur content of the fuel oil received during the month;
   iii. the average heat content of the fuel received during the month;
   iv. the method used to determine the maximum sulfur and heat content of the fuel oil;
   v. the calculation of lb SO_2 per million Btu; and
   vi a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the fuel oil fired during the period.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 if the sulfur and heat content of the oil are not monitored and recorded.

Reporting [15A NCAC 02Q .0508(f)]

e. No reporting is required for sulfur dioxide emissions from the firing of natural gas in the lime kilns **(ID Nos. G09028 and G09029)**.

f. The Permittee shall submit a summary report of the fuel oil supplier certifications and calculated emission rates postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from the No. 4 Lime Kiln **(ID No. G09028)** and the No. 5 Lime Kiln **(ID No. G09029)** shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent of more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in Section 2.1 O.3.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

c. To ensure compliance, once a day while in operation the Permittee shall observe the emission points of the lime kilns **(ID Nos. G09028 and G09029)** for any visible emissions above normal. The daily observation must be made for each day of the calendar year period to ensure compliance with this requirement. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If the weather conditions (i.e. fog) are such that the source emission points of this source cannot be observed, the Permittee shall make a minimum of two (2) attempts to make the required observation, a record of this fact along with the corresponding date and time(s) shall substitute for the daily observation. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 O.3.a, above.

   If the above-normal emissions are not corrected per (i) above or if the demonstration per (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;

ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 02D .0528: TOTAL REDUCED SULFUR FROM KRAFT PULP MILLS

a. The emissions of total reduced sulfur shall not exceed 20 ppm by volume on a dry basis, corrected to 10 percent oxygen, measured as hydrogen sulfide and averaged per discrete contiguous 12-hour time period, from the No. 4 Lime Kiln **(ID No. G09028)** or the No. 5 Lime Kiln **(ID No. G09029)**.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 O.4.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0528

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

c. To ensure compliance, the Permittee shall calibrate, maintain, and operate a continuous monitoring system for determining the total reduced sulfur (as hydrogen sulfide, dry basis, corrected to 10 percent oxygen) emissions discharged to the atmosphere and record the output of the system. The continuous monitoring system shall be operated in accordance with the applicable performance specifications in 40 CFR Part 60 Appendix B and quality assurance procedures in 40 CFR Part 60, Appendix F, Section 3, unless an alternative monitoring and quality assurance program is approved by the DAQ. The monitoring system downtime shall not exceed 5 percent. If any 12-hour block average exceeds the limit above or the records are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0528, except that two percent of all 12-hour total reduced sulfur averages per quarter year in excess of the limitation in Section 2.1 O.4.a, above, in the absence of start-ups, shutdowns, and malfunctions, shall not be considered in violation.

Reporting [15A NCAC 02Q .0508(f)]

d. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

5. 15A NCAC 02D .0614: COMPLIANCE ASSURANCE MONITORING

a. For the cyclone mist eliminators in series with wet scrubbers **(ID Nos. 09-CD-009-01 and 09-CD-010-01)** associated with the No. 4 Lime Kiln **(ID Nos. G09028 and G09029)**, the Permittee shall comply with 40 CFR part 64 pursuant to 15A NCAC 02D .0614 to ensure that the lime kilns comply with the emission limits of 15A NCAC 02D .0508.

Background

b. Emission Units: No. 4 Lime Kiln **(ID No. G09028)**
No. 5 Lime Kiln **(ID No. G09029)**

c. Applicable Regulation, Emission Limitation, and Monitoring Requirements
i. Regulation: 15A NCAC 02D .0508: Particulates from Pulp and Paper Mills
ii. Emission Limits:
PM: 0.5 pounds of particulate matter per equivalent tons of air dried pulp.
iii. Control Technology: cyclone mist eliminator in series with a flooded disc-type wet scrubber

Monitoring Approach

d. The key elements of the monitoring approach for particulate matter, including parameters to be monitored, parameter ranges and performance criterial are presented in the following table.

Measure	Indicator		
	No. 4 Lime Kiln (≤ 50 percent of heat input from No. 6 fuel oil)	**No. 4 Lime Kiln (> 50 percent of heat input from No. 6 fuel oil)**	**No. 5 Lime Kiln**
I. Indicator	Scrubber differential pressure and scrubber recirculation liquid flow rate	Scrubber differential pressure and total liquid injection rate (venturi liquid flow plus quench liquid flow)	Scrubber differential pressure and total liquid injection rate (venturi liquid flow plus quench liquid flow)
Measuring approach	Install pressure drop and flow rate continuous monitors	Install pressure drop and flow rate continuous monitors	Install pressure drop and flow rate continuous monitors
II. Indicator Range[a]	Scrubber differential pressure indicator range: minimum 3-hour average TBD[b] Scrubber recirculation liquid flow rate indicator range: minimum 3-hour average TBD[b] An excursion occurs when the 3-hour average measurement is less than the indicator range. The excursion triggers corrective action and reporting requirement. No more than one excursion will be attributed in any given 24-hour period. The QIP threshold is a total of 6 excursions during any 6-month period. The QIP shall be prepared as required under 40 CFR 64.8.	Pressure drop indicator range: minimum 3-hour average of 20 inches of H_2O Scrubber liquid injection rate indicator range: minimum 3-hour average 289 gallons per minute (venturi plus quench liquid flow rate) An excursion occurs when the 3-hour average measurement is less than the indicator range. The excursion triggers corrective action and reporting requirement. No more than one excursion will be attributed in any given 24-hour period. The QIP threshold is a total of 6 excursions during any 6-month period. The QIP shall be prepared as required under 40 CFR 64.8.	Pressure drop indicator range: minimum 3-hour average of 19.2 inches of H_2O Scrubber liquid injection rate indicator range: minimum 3-hour average 376 gallons per minute (venturi plus quench liquid flow rate) An excursion occurs when the 3-hour average measurement is less than the indicator range. The excursion triggers corrective action and reporting requirement. No more than one excursion will be attributed in any given 24-hour period. The QIP threshold is a total of 6 excursions during any 6-month period. The QIP shall be prepared as required under 40 CFR 64.8.
III. Performance Criteria			
Data Representativeness	Pressure drop tabs installed before and after the scrubber. Flow measurement devices located prior to liquid injection point.	Pressure drop tabs installed before and after the scrubber. Flow measurement devices located prior to liquid injection point.	Pressure drop tabs installed before and after the scrubber. Flow measurement devices located prior to liquid injection point.
QA/QC Practices and Criteria	Annual calibration of pressure drop and flow monitoring devices.	Annual calibration of pressure drop and flow monitoring devices.	Annual calibration of pressure drop and flow monitoring devices.
Monitoring Frequency	Continuous pressure drop and flow measurements; minimum of one value every 15 minutes of operating time, excluding periods of monitoring downtime and required QA/QC.	Continuous pressure drop and flow measurements; minimum of one value every 15 minutes of operating time, excluding periods of monitoring downtime and required QA/QC.	Continuous pressure drop and flow measurements; minimum of one value every 15 minutes of operating time, excluding periods of monitoring downtime and required QA/QC.
Data Collection Procedures	The data acquisition system shall retain all 15-minute data and 3-hour block averages.	The data acquisition system shall retain all 15-minute data and 3-hour block averages.	The data acquisition system shall retain all 15-minute data and 3-hour block averages.
Averaging Period	The 15-minute pressure drop and liquid injection rate data are used to calculate the 3-hour block average.	The 15-minute pressure drop and liquid injection rate data are used to calculate the 3-hour block average.	The 15-minute pressure drop and liquid injection rate data are used to calculate the 3-hour block average.

[a]During performance testing, the established continuous compliance monitoring parameters shall not apply. Performance tests will serve to provide the monitoring during these periods.
[b]The scrubbing liquid injection rate and pressure drop ranges shall be determined during a performance test to be completed and start monitoring of these parameters no later than 180 days after the effective date of Permit No. 08961T19.

Reporting [15A NCAC 02Q .0508(f) and 40 CFR 64.9(a)]

e. The Permittee shall submit a summary report of all monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. In addition, the summary report shall contain the following information, as applicable:
   i. Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
   ii. Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
   iii. A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the Permittee shall include, in the next summary report, documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances.

P. No. 5 Lime Silo Dust Collection System (ID No. G09032):

- **No. 5 lime storage silo (No. 09-TK-013)**
- **Hot Lime Conveyor (No. 09-PU-014)**
- **Lime Crusher (No. 09-PU-015)**
- **Bucket Elevator (No. 09-PU-016)**

Equipped with a cartridge-type bagfilter (ID No. 09-CD-013-01)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E = 4.10\ P^{0.67}$ where: E = allowable particulate emission rate in pounds per hour P = process weight rate in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from the No. 5 lime silo dust collection system **(ID No. G09032)** shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 P.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

c. Particulate matter emissions from the No. 5 lime silo dust collection system **(ID No. G09032)** shall be controlled by the cartridge bagfilter **(ID No. 09-CD-013-01)**. To ensure compliance, the Permittee shall perform inspections and maintenance. As a minimum, the inspection and maintenance requirement shall include the following:
   i. a monthly visual inspection (for each calendar month, not to exceed 6 weeks from the previous inspection) of the system ductwork and material collection unit for leaks; and
   ii. an annual internal inspection (for each calendar year, not to exceed 14 months from the previous inspection) of the cartridge filter structural integrity.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and cartridge filter are not inspected and maintained.

d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. the results of any maintenance performed on the cartridge filter; and
   iv. any corrections made.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.

f. The Permittee shall submit a summary report of the monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar

year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from the No. 5 lime silo dust collection system (**ID No. G09032**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521 (d)]

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 P.2.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

c. To ensure compliance, once a month the Permittee shall observe the emission points of the No. 5 lime silo dust collection system **(ID No. G09032)** for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 P. 2.a. above.

   If the above-normal emissions are not corrected per (i) above or if the demonstration per (ii) above cannot be made, the Permittee shall be deemed in noncompliance with 15A NCAC 02D.0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be above normal along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit a summary report of the monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

Q. No. 6 lime silo dust collection system (ID No. G09031):

- **Lime Storage Silo (No. 09-TK-018),**
- **Fresh lime Storage Silo (No. 09-TK-019)**
- **No. 6 Hot Lime Conveyor (No. 09-PU-011)**
- **Lime Crusher (No. 09-PU-012)**
- **Bucket Elevator (No. 09-PU-013)**

Equipped with a cartridge-type bagfilter (ID No. 09-CD-018-01)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E = 4.10\ P^{0.67}$ where: E = allowable particulate emission rate in pounds per hour P = process weight rate in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from the No. 6 lime silo dust collection system **(ID No. G09031)** shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 Q.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

c. Particulate matter emissions from the No. 6 lime silo dust collection system **(ID No. G09031)** shall be controlled by the cartridge bagfilter **(ID No. 09-CD-018-01)**. To ensure compliance, the Permittee shall perform inspections and maintenance. As a minimum, the inspection and maintenance requirement shall include the following:
   i. a monthly visual inspection (for each calendar month, not to exceed 6 weeks from the previous inspection) of the system ductwork and material collection unit for leaks; and
   ii. an annual internal inspection (for each calendar year, not to exceed 14 months from the previous inspection) of the cartridge filter structural integrity.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and cartridge filter are not inspected and maintained.

d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. the results of any maintenance performed on the cartridge filter; and
   iv. any corrections made.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.

f. The Permittee shall submit a summary report of the monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar

year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from the No. 6 lime silo dust collection system **(ID No. G09031)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in 2.1 Q.2.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

c. To ensure compliance, once a month the Permittee shall observe the emission points of the sources for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 Q.2.a, above.

   If the above-normal emissions are not corrected per (i) above or if the demonstration per (ii) above cannot be made, the Permittee shall be deemed in noncompliance with 15A NCAC 02D.0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be above normal along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit a summary report of the monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

R. Lime Production - Other Units (ID No. G09027):

- **No. 4 Lime Pre-Coat Filter (ID No. 09-PU-001),**
- **No. 5 Lime Pre-Coat Filter (ID No. 09-PU-002),**
- **No. 6 Lime Pre-Coat Filter (ID No.09-PU-003)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Toxic Air Pollutants	State Enforceable Only (See Section 2.3 A)	15A NCAC 02D .1100

CAUSTICIZING (AREA 10)

S. Slakers:

- **No. 5 Lime Slaker (ID No. G10035, No. 10-PU-027) – serves No. 5 Lime Kiln and controlled by a natural draft condensing scrubber (ID No. 10-CD-027-01)**
- **No. 6 Lime Slaker (ID No. G10034, No. 10-PU-036) – serves No. 4 Lime Kiln and controlled by a natural draft condensing scrubber (ID No. 10-CD-036-01)**

Green Liquor Clarification and Storage (ID No. G10089)
Green Liquor Stabilization (ID No. G10090)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	**Affected Sources: G10035 and G10034** $E = 4.10\ P^{0.67}$ where: E = allowable particulate emission rate in pounds per hour P = process weight rate in tons per hour	15A NCAC 02D .0515
Visible emissions	**Affected Sources: G10035 and G10034** 20 percent opacity	15A NCAC 02D .0521
Toxic Air Pollutants	State Enforceable Only (See Section 2.3 A)	15A NCAC 02D .1100

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from the Nos. 5 and 6 Lime Slakers **(ID Nos. G10035 and G10034)** shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 S.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

c. Particulate matter emissions from the No. 5 Lime Slaker **(ID No. G10035)** shall be controlled by the natural draft scrubber **(ID No. 10-CD-027-01)**. Particulate matter emissions from the No. 6 Lime Slaker **(ID No. G10034)** shall be controlled by the natural draft wet scrubber **(ID No. 10-CD-036-01)**. The Permittee shall install, operate, and maintain a wet scrubbing liquid flowmeter on each scrubber. To ensure compliance and the effective operation of the scrubbers, the Permittee shall monitor and record, once per day, scrubbing liquid flow rate. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If the emission source(s) is not operating, a record of this fact along with the corresponding date and time shall substitute for the daily observation. To ensure quality, the flow rate gauges shall be calibrated annually. The scrubber shall be operated to ensure the scrubbing liquid flow rate is greater than 30 gallons per minute. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the scrubber liquid flow rate is not maintained above the above prescribed limit or if these records are not maintained.

d. If the scrubber liquid flow rate readings recorded as required in Section 2.1 S.1.c, above, are observed to be outside the prescribed range, the Permittee shall inspect the scrubber(s) for malfunctions and clean or repair, as necessary. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the inspections, cleaning, and repairs are not performed.

e. The results of scrubber inspection and maintenance activities in Section 2.1 S.1.c and S.1.d, above, shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative of DAQ upon request. The logbook shall record the following:
   i. the date and time of each recorded action
   ii. the results of each inspection;
   iii. the causes for any variance from the prescribed operating range for the scrubber(s); and
   iv. corrective actions taken.
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

f. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.

g. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from the Nos. 5 and 6 Lime Slakers **(ID Nos. G10035 and G10034)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in 2.1 S.2.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

c. To ensure compliance, once a month the Permittee shall observe the emission points of the Nos. 5 and 6 Lime Slakers **(ID Nos. G10035 and G10034)** for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 S.2.a, above.
   If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed in noncompliance with 15A NCAC 02D.0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be above normal along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit a summary report of the monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

POWER (AREA 11)

T. Utility Boilers:

- **Big Bill (ID No. G11037, No. 11-CU-003) – equipped with low-NO_X burners, and a 2-chamber, 3-field electrostatic precipitator (ID No. 11-CD-003-01);**
- **Peter G. (ID No. G11038, No. 11-CU-004) – equipped with low-NO_X burners and natural gas/kerosene igniters, and a 2-chamber, 3-field electrostatic precipitator (ID No. 11-CD-004-01); and**
- **Riley Coal (ID No. G11039, No. 11-CU-005) – equipped with low-NO_X burners and natural gas/kerosene igniters; a 2-chamber, 3-field electrostatic precipitator (ID No. 11-CD-005-01); and a wet scrubber (ID No. 11-CD-005-02)***
  **This control device is not necessary for compliance with any currently applicable regulation.*

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	0.16 lb/million Btu heat input	15A NCAC 02D .0503
Sulfur dioxide	2.3 lb/million Btu heat input Monitoring Requirements	15A NCAC 02D .0516 15A NCAC 02D .0608
Nitrogen oxides	1.8 lb/million Btu heat input	15A NCAC 02D .0519
Visible emissions	40 percent opacity	15A NCAC 02D .0521
Visible emissions	Excess Emissions Monitoring Requirements (40 CFR 51, Appendix P)	15A NCAC 02D .0606
Particulate matter	Compliance assurance monitoring	15A NCAC 02D .0614
Particulate matter	0.15 lb/million Btu heat input (See Section 2.2 A.1)	15A NCAC 02D .0530
Nitrogen oxides	Nitrogen oxides emissions from the Big Bill, Peter G., Riley Coal and No. 4 Power Boilers shall be limited to 4,368 tons per rolling consecutive 12 months (See Section 2.2 A.1)	15A NCAC 02D .0530
Carbon monoxide	Carbon monoxide emissions from the Big Bill, Peter G., Riley Coal and No. 4 Power Boilers shall be limited to 898.2 tons per consecutive 12 months (See Section 2.2 A.1)	15A NCAC 02D.0530
Sulfur dioxide	Sulfur dioxide emissions from the Big Bill, Peter G., Riley Coal and No. 4 Power Boilers shall be limited to 8,277 tons per rolling consecutive 12 months (See Section 2.2 A.2)	15A NCAC 02Q .0317 Avoidance of 15A NCAC 02D .0530
Particulate matter ($PM/PM_{10}/PM_{2.5}$), sulfur dioxide, nitrogen oxides, carbon monoxide, H_2SO_4, fluorides, TRS, lead, and volatile organic compounds	See Section 2.2 A.4	15A NCAC 2D 0530(u)
Hazardous air pollutants	See Section 2.2 E	15A NCAC 02D .1109 Case-by-case MACT

1. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

a. Emissions of particulate matter from the combustion of coal that are discharged from each of these boilers **(ID Nos. G11037, G11038, and G11039)** into the atmosphere shall not exceed 0.16 pounds per million Btu heat input.

Testing [15A NCAC 02Q .0508(f)]

b. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit(s) above by testing each of these boilers **(ID Nos. G11037, G11038, and G11039)** annually for particulate matter in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in General Condition JJ. If the results of the testing demonstrate that emissions are less than 80 percent of the limit in Section 2.1 T.1.a, above, the testing frequency may be reduced to once every five years (and not longer than 61 months between compliance tests). If the results of this or any test are above the limit given in Section 2.1 T.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503 and the Permittee shall resume performance testing on an annual basis, beginning no more than 12 months after the previous test.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

c. Particulate matter emissions from these boilers **(ID Nos. G11037, G11038, and G11039)** shall be controlled by their respective electrostatic precipitators (ESP) **(ID Nos. 11-CD-003-01, 11-CD-004-001, and 11-CD-005-001)**.
   i. To ensure compliance with the emission limits in Section 2.1 T.1.a, the Permittee shall install, operate, and maintain an opacity monitor at the exhaust of these boilers **(ID Nos. G11037, G11038, and G11039)**. The Permittee shall maintain the opacity at or below the opacity limit specified in Section 2.1 T.4.a, below, following the procedure in Section 2.1 T.4.b, below.
   ii. The Permittee shall determine compliance with the emission limit in Section 2.1 T.1.a, above, pursuant to the ongoing compliance determinations in the monitoring, recordkeeping, and reporting requirements of Section 2.1 T.4 and T.5, below. However, excess emissions shall be reported in accordance with 15A NCAC 02D .0535 as outlined in General Condition I.

   The Permittee shall be deemed in noncompliance with 15A NCAC .0503 if the emissions are monitored and recorded as required above.

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES
15A NCAC 02D .0608: OTHER LARGE COAL OR RESIDUAL OIL BURNERS

a. Emissions of sulfur dioxide from these boilers **(ID Nos. G11037, G11038, and G11039)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 T.2.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 and 02D .0608.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

c. To ensure compliance with Section 2.1 T.2.a, the Permittee shall monitor the sulfur content and heat content of all the coal burned during the period by using coal supplier certification per total shipment received. The coal supplier certifications shall be recorded in a logbook (written or electronic format) per total shipment and include the following information:
   i. the name of the coal supplier;
   ii. a statement verifying that the methods used to determine the maximum sulfur content and heat content of the coal were in accordance with the following:
      (A) sampling - ASTM Method D 2234;
      (B) preparation - ASTM Method D 2013;
      (C) gross calorific value (Btu) - ASTM Method D-2015, D-3286, D-1989, or D-5865;
      (D) moisture content - ASTM Method D 3173 or D-2961; and
      (E) sulfur content - ASTM Method D 3177 or ASTM Method D 4239.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 and 02D .0608 if the sulfur and heat content of the coal are not monitored and recorded.

d. The Permittee is required to calculate and record in a logbook (written or electronic format) the equivalent emission rate in pounds of sulfur dioxide per million Btu heat content of the coal per total shipment. The equivalent sulfur dioxide emission rate (pounds per million Btu heat input) shall be calculated in accordance with Method 19 of 40 CFR 60, Appendix A, Section 12.6 – Sulfur Retention Credit for Compliance Fuel. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 and 02D .0608 if these records are not kept or if the results show an exceedance of the limit given in Section 2.1 T.2.a, above.

Reporting [15A NCAC 02Q .0508(f)]

e The Permittee shall submit a summary report of the coal supplier certifications and calculated emission rates postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 02D .0519: CONTROL OF NITROGEN DIOXIDE AND NITROGEN OXIDES

a. Emissions of nitrogen oxides shall not exceed 1.8 pounds per million Btu of heat input from any coal-fired boiler with a capacity of 250 million Btu per hour or more.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 T.3.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0519.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required from the firing of coal in these sources for this regulation.

4. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from these boilers **(ID Nos. G11037, G11038, and G11039)** shall not be more than 40 percent opacity (except during startups) when averaged over a six-minute period. However, six-minute periods averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity.

b. The Permittee shall install, operate, and maintain continuous opacity monitoring systems (COMS). Compliance with the 40 percent opacity limit shall be determined as follows:
   i. No more than four six-minute periods shall exceed the opacity standard in any one day; and
   ii. The percent of excess emissions (defined as the percentage of monitored operating time in a calendar quarter above the opacity limit) shall not exceed 0.8 percent of the total operating hours. If a boiler operates less than 500 hours during a calendar quarter, the percent of excess emissions shall be calculated by including hours operated immediately previous to this quarter until 500 operational hours are obtained.

   Excess emissions shall be reported in accordance with 15A NCAC 02D .0535 as outlined in General Conditions I.A and I.B. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if the Permittee does not monitor visible emissions as required above.

Testing [15A NCAC 02Q .0508(f)]

c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 T.4.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

d. The Permittee shall use a continuous opacity monitoring system (COMS) to monitor and record opacity. Continuous emissions monitoring and recordkeeping of opacity shall be performed as described in Paragraphs 2 and 3.1.1 through 3.1.5 of Appendix P of 40 CFR Part 51. The monitoring systems shall meet the minimum specifications described in Paragraphs 3.3 through 3.8 of Appendix P of 40 CFR Part 51. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if the monitoring is not performed, if the monitored values exceed the limitations given above, or if the records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit a summary report of the monitoring data postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year

for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

5. 15A NCAC 02D .0606: SOURCES COVERED BY APPENDIX P OF 40 CFR PART 51 (CONTINUOUS OPACITY MONITORING AND EXCESS EMISSIONS)

For the "Big Bill," "Peter G.," and "Riley Coal" Boilers **(ID Nos. G11037, G11038, and G11039)**, the provisions of 15A NCAC 02D .0606 apply as follows:

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f) and 02D .0606]

a. The Permittee shall use a continuous opacity monitoring system (COMS) installed on the exhaust of the boilers **(ID Nos. G11037, G11038, and G11039)** to monitor and record opacity. Continuous emissions monitoring and recordkeeping of opacity shall be performed as described in Paragraphs 2 and 3.1.1 through 3.1.5 of Appendix P of 40 CFR Part 51. The monitoring systems shall meet the minimum specifications described in Paragraphs 3.3 through 3.8 of Appendix P of 40 CFR Part 51.

b. The quarterly excess emissions (EE) reports required under Appendix P of 40 CFR Part 51 shall be used as an indication of good operation and maintenance of the electrostatic precipitators. These sources shall be deemed to be properly operated and maintained if the percentage of time the opacity emissions, calculated on a 6-minute average, in excess of 40 percent (including startups, shutdowns, and malfunctions) does not exceed 3.0 percent of the total operating time for any given calendar quarter, adjusted for monitor downtime (MD) as calculated below. In addition, these sources shall be deemed to be properly operated and maintained if the percent monitor downtime does not exceed 2.0 percent.

Calculations for %EE and %MD

Percent Excess Opacity Emission (%EE) Calculation:

$$\%EE=\left\{\frac{\text{Total Excess Emission Time*}}{[(\text{Total Source Operating Time***})-(\text{Monitor Downtime})]}\right\}\text{x } 100$$

Percent Monitor Downtime (%MD) Calculation for COMS:

$$\%MD=\left\{\frac{\text{Total Monitor Downtime**}}{\text{Total Source Operating Time***}}\right\}\text{ x } 100$$

* Total Excess Emission Time contains any 6-minute period greater than 40% opacity including startup, shutdown, and malfunction.

** Total Monitor Downtime includes Quality Assurance (QA) activities unless exempted by regulation or defined in an agency approved QA Manual. The amount of exempt QA Time will be reported in the quarterly report as such.

*** If a source operates less than 2200 hours during any quarter, the source may calculate the %EE and/or %MD using all operating data for the current quarter and the preceding quarters until 2200 hours of data are obtained. [N.C.G.S. 143-215.110]

Reporting [15A NCAC 02Q .0508(f) and 02D .0606]

c. The Permittee shall submit the excess emissions and monitor downtime reports as required under Appendix P of 40 CFR Part 51 no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. For periods of excess emissions, defined as each six-minute period average greater than 40 percent opacity, the opacity measurements recorded by the COMS shall be reported as described in Paragraphs 4 and 5.1 of Appendix P of 40 CFR Part 51 except that a six-minute time period shall be deemed as an appropriate alternative opacity averaging period as described in Paragraph 4.2 of Appendix P of 40 CFR Part 51. A minimum of 36 data points, equally spaced, is required to determine a valid six-minute value. All periods of noncompliance from the requirements of this permit must be clearly identified.

6. 15A NCAC 02D .0614: COMPLIANCE ASSURANCE MONITORING

a. For the electrostatic precipitators **(ID Nos. 11-CD-003-01, 11-CD-004-01, and 11-CD-005-01)** associated with the Utility Boilers **(ID Nos. G11037, G11038, and G11039)**, the Permittee shall comply with 40 CFR part 64

pursuant to 15A NCAC 02D .0614 to ensure that the boilers comply with the emission limits of 15A NCAC 02D .0508.

Background

b. Emission Units: Big Bill Utility Boiler **(ID No. G11037)**
Peter G. Utility Boiler **(ID No. G11038)**
Riley Coal Utility Boiler **(ID No. G11039)**

c. Applicable Regulation, Emission Limitation, and Monitoring Requirements
   i. Regulation: 15A NCAC 02D .0503: Particulates from Fuel Burning Indirect Heat Exchangers
   ii. Emission Limits:
   PM: 0.15 lb/million Btu
   iii. Control Technology: electrostatic precipitators

Monitoring Approach

d. The key elements of the monitoring approach for particulate matter, including parameters to be monitored, parameter ranges and performance criterial are presented in the following table.

	Indicator		
Measure	**Big Bill Utility Boiler**	**Peter G. Utility Boiler**	**Riley Coal Utility Boiler**
I. Indicator	Opacity of ESP exhaust	Opacity of ESP exhaust	Opacity of ESP exhaust
Measuring approach	COMS in ESP exhaust	COMS in ESP exhaust	COMS in ESP exhaust
II. Indicator Range	The opacity indicator range is a 3-hour block average opacity of 9.2 percent. An excursion occurs when the 3-hour block average measurement is greater than the indicator range. The excursion triggers corrective action and reporting requirement. The QIP threshold is when the total duration of excursions is greater than 5 percent of the source operating time during any 6-month period. The QIP shall be prepared as required under 40 CFR 64.8.	The opacity indicator range is a 3-hour block average opacity of 14.1 percent. An excursion occurs when the 3-hour block average measurement is greater than the indicator range. The excursion triggers corrective action and reporting requirement. The QIP threshold is when the total duration of excursions is greater than 5 percent of the source operating time during any 6-month period. The QIP shall be prepared as required under 40 CFR 64.8.	The opacity indicator range is a 3-hour block average opacity of 7.0 percent. An excursion occurs when the 3-hour block average measurement is greater than the indicator range. The excursion triggers corrective action and reporting requirement. The QIP threshold is when the total duration of excursions is greater than 5 percent of the source operating time during any 6-month period. The QIP shall be prepared as required under 40 CFR 64.8.
III. Performance Criteria			
Data Representativeness	The COMS was installed at a representative location in the utility boiler stack per PS-1.	The COMS was installed at a representative location in the utility boiler stack per PS-1.	The COMS was installed at a representative location in the utility boiler stack per PS-1.
QA/QC Practices and Criteria	The COMS was initially installed and evaluated per PS-1. Zero and span drift are checked daily and a quarterly filter audit is performed.	The COMS was initially installed and evaluated per PS-1. Zero and span drift are checked daily and a quarterly filter audit is performed.	The COMS was initially installed and evaluated per PS-1. Zero and span drift are checked daily and a quarterly filter audit is performed.
Monitoring Frequency	The opacity of the ESP exhaust is monitored continuously (every 10 seconds)	The opacity of the ESP exhaust is monitored continuously (every 10 seconds)	The opacity of the ESP exhaust is monitored continuously (every 10 seconds)

Measure	Indicator		
	Big Bill Utility Boiler	**Peter G. Utility Boiler**	**Riley Coal Utility Boiler**
Data Collection Procedures	The data acquisition system shall retain all 6-minute data and 3-hour block averages according to PS-1.	The data acquisition system shall retain all 6-minute data and 3-hour block averages according to PS-1.	The data acquisition system shall retain all 6-minute data and 3-hour block averages according to PS-1.
Averaging Period	The 10-second opacity data are used to calculate the 6-minute averages. The 6-minute averages are used to calculate the 3-hour block average.	The 10-second opacity data are used to calculate the 6-minute averages. The 6-minute averages are used to calculate the 3-hour block average.	The 10-second opacity data are used to calculate the 6-minute averages. The 6-minute averages are used to calculate the 3-hour block average.

Reporting [15A NCAC 02Q .0508(f) and 40 CFR 64.9(a)]

e. The Permittee shall submit a summary report of all monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. In addition, the summary report shall contain the following information, as applicable:
   i. Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
   ii. Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
   iii. A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the Permittee shall include, in the next summary report, documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances.

U. No. 4 Power Boiler (ID No. G11040) – equipped with low-NO_X burner components and a Separated Overfire Air (SOFA) system, and a 2-Chamber, 4-Field electrostatic precipitator (ID No. 11-CD-006-01); a urea-based Selective Non-Catalytic Reduction (SNCR) NO_X emission reduction system (ID No. 11-CD-006-02); and a wet scrubber (ID No. 11-CD-006-03)*

**This control device is not necessary for compliance with any currently applicable regulation.*

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Nitrogen oxides	0.8 pounds per million Btu heat input while burning oil; 1.8 pounds per million Btu heat input while burning coal; or $E = [(Ec)(Qc) + (Eo)(Qo)]/Qt$ Where; E = the emission limit in pounds per million Btu heat input for the fuel combination; Ec = 1.8 pounds per million Btu heat input while burning coal; Eo = 0.8 pounds per million Btu heat input while burning oil; Qc = coal heat input in Btu per hour; Qo = oil heat input in Btu per hour; and Qt = Qc + Qo	15A NCAC 02D .0519
Particulate matter	0.10 lb/million Btu heat input (all fuels)	15A NCAC 02D .0524 40 CFR 60, Subpart D
Visible emissions	20 percent opacity	15A NCAC 02D .0524 40 CFR 60, Subpart D
Sulfur dioxide	0.8 lb/million Btu heat input (oil) 1.2 lb/million Btu heat input (coal) *See table in Section 2.1 U.1.b, below*	15A NCAC 02D .0524 40 CFR 60, Subpart D
Nitrogen oxides	0.3 lb/million Btu heat input (oil) 0.7 lb/million Btu heat input (coal) *See table in Section 2.1 U.1.b, below*	15A NCAC 02D .0524 40 CFR 60, Subpart D
Particulate matter	Compliance assurance monitoring	15A NCAC 02D .0614
Nitrogen oxides	Nitrogen oxides emissions from the Big Bill, Peter G., Riley Coal and No. 4 Power Boilers shall be limited to 4,368 tons per rolling consecutive 12 months (See Section 2.2 A.1)	15A NCAC 02D .0530
Carbon monoxide	Carbon monoxide emissions from the Big Bill, Peter G., Riley Coal and No. 4 Power Boilers shall be limited to 898.2 tons per rolling consecutive 12 months (See Section 2.2 A.1)	15A NCAC 02D .0530
Particulate matter	0.085 lb/million Btu heat input (See Section 2.2 A.1)	15A NCAC 02D .0530
Sulfur dioxide	Sulfur dioxide emissions from the Big Bill, Peter G., Riley Coal and No. 4 Power Boilers shall be limited to 8,277 tons per rolling consecutive 12 months (See Section 2.2 A.2)	15A NCAC 02Q .0317 Avoidance of 15A NCAC 02D .0530

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter ($PM/PM_{10}/PM_{2.5}$), sulfur dioxide, nitrogen oxides, carbon monoxide, H_2SO_4, fluorides, TRS, lead, and volatile organic compounds	See Section 2.2 A.4	15A NCAC 02D .0530(u)
Hazardous air pollutants	See Section 2.2 E.1	15A NCAC 02D .1109 Case-by-case MACT

1. 15A NCAC 02D .0519: CONTROL OF NITROGEN OXIDES EMISSIONS

a. Emissions of nitrogen oxides from the boiler **(ID No. G11040)** when burning coal and oil shall be calculated by the following equation :

E = [(Ec)(Qc) + (Eo)(Qo)]/Qt

where: E = emission limit for combined burning of coal and oil in pounds per million Btu heat input
Ec = 1.8 pounds per million Btu heat input for coal only
Eo = 0.8 pounds per million Btu heat input for oil only
Qc = coal heat input in Btu per hour
Qo = oil heat input in Btu per hour
Qt = Qc + Qo

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 U.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0519.

c. **Monitoring/Recordkeeping** [15A NCAC 02Q .0508(f)]
No monitoring recordkeeping or reporting are required for the burning of coal or oil in this source.

2. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60, SUBPART D)

a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 02D .0524, "New Source Performance Standards" (NSPS) as promulgated in 40 CFR Part 60, Subpart D, including Subpart A "General Provisions."

b. For the No. 4 Power Boiler **(ID No. G1140)** the following emission limits shall not be exceeded [40 CFR 60.42, 60.43, and 60.44]:

Regulated Pollutant	Limits/Standards
Particulate matter	0.10 lb/million Btu heat input (all fuels)
Visible emissions	20 percent opacity (except during periods of startup, shutdown and malfunction) except for one six-minute period per hour of not more than 27 percent opacity
Sulfur dioxide	0.8 lb (oil only) / million Btu heat input 1.2 lb (coal only) / million Btu heat input or S = [y (0.8) + z (1.2)] / (y + z) Where: y = % total heat input from oil z = % total heat input from coal

Regulated Pollutant	Limits/Standards
Nitrogen oxides	0.3 lb (oil only) / million Btu heat input 0.7 lb (coal only) / million Btu heat input or S = [y (0.3) + z (1.2)] / (y + z) Where: y = % total heat input from oil z = % total heat input from coal

Testing [15A NCAC 02Q .0508(f)]

c. The Permittee shall demonstrate compliance with the emission limit(s) in Section 2.1 U.2.b, above, by testing the No. 4 Power Boiler **(ID No. G1140)** annually for particulate matter in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ. If the results of the testing demonstrate that emissions are less than 80 percent of the limit in Section 2.1 U.2.b, above, the testing frequency may be reduced to once every five years (and not longer than 61 months between compliance tests). If the results of this or any test are above the limit given in Section 2.1 U.2.b, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 and the Permittee shall resume performance testing on an annual basis, beginning no more than 12 months after the previous test.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

d. Particulate matter emissions from this boiler **(ID No. G11040)** shall be controlled by the ESP **(ID Nos. 11-CD-006-01)**. To ensure compliance with the particulate emission limits in Section 2.1 U.2.b, the Permittee shall follow the visible emissions requirements as specified in Section 2.1 U.2.e through U.2.f, below. The Permittee shall be deemed in noncompliance with 15A NCAC .0524 if the monitoring and recordkeeping requirements above are not met.

Monitoring/Recordkeeping [15A NCAC 02D .0524]

e. The Permittee shall install, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of emissions meeting the requirements of 40 CFR Part 60. [40 CFR 60.45] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the monitoring is not conducted as required above.

f. Compliance with visible emissions limit of Section 2.1 U.1.b, above, shall be determined using six-minute averages of the COMS values. If any six-minute period average exceeds 20 percent opacity (except during periods of startup, shutdown and malfunction) except for one six-minute period per hour of not more than 27 percent opacity, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524. [40 CFR 60.45(g)(1)]

g. The COMS and the facility shall be assessed for good operation and maintenance (O&M) practices in accordance with 40 CFR Part 60, Subpart A, Section 60.11(d); Subpart D, Section 60.45; and the EPA Region IV Continuous Emission Monitor Enforcement Plan (CEP).

Monitoring / Recordkeeping [15A NCAC 02D .0524, 02Q .0508(f)]

h. The Permittee shall monitor sulfur dioxide emissions by fuel sampling and analysis. [40 CFR 60.45(b)(2)]

i. The Permittee shall monitor the sulfur and heat content of all the coal burned during the period by using coal supplier certification per total shipment received. The coal supplier certification shall be recorded in a logbook (written or electronic format) per total shipment and include the following information:
   i. the name of the coal supplier;
   ii. a statement verifying that the methods used to determine the maximum sulfur content of the coal was determined in accordance with the following:
      (A) sampling - ASTM Method D 2234;
      (B) preparation - ASTM Method D 2013;
      (C) gross calorific value (Btu) - ASTM Method D-2015, D-3286, D-1989, or D-5865;
      (D) moisture content - ASTM Method D 3173 or D-2961; and
      (E) sulfur content - ASTM Method D 3177 or ASTM Method D 4239.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the sulfur and heat content of the coal is not monitored and recorded.

j. The maximum equivalent sulfur dioxide emission rate (as SO_2) of any coal received and burned in the boiler shall not exceed 1.2 pounds per million Btu.
   i. The Permittee is required to calculate and record in a logbook (written or electronic format) the pounds of sulfur dioxide per million Btu heat content of the coal per total shipment.
   ii. The equivalent sulfur dioxide emission rate (pounds per million Btu heat input) shall be calculated in accordance with Method 19 of 40 CFR 60, Appendix A, Section 12.6 – Sulfur Retention Credit for Compliance Fuel.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the results show an exceedance of the limit given above if the requirements above are not monitored and recorded.

k. The Permittee shall monitor the sulfur content and heat content of the No. 2 and No. 6 fuel oil by using fuel oil supplier certifications per shipment and/or site specific fuel oil storage tank sampling and analysis. The fuel oil supplier certifications and/or sampling results shall be recorded in a logbook (written or electronic format) and include the following information:
   i. the name of the fuel oil supplier; and
   ii. a statement verifying that the methods used to determine the maximum sulfur content of the fuel oil was in accordance with the following:
      (A) sample collection – ASTM D4177 or D4057;
      (B) heat of combustion (Btu) – ASTM D240 or D4868; and
      (C) sulfur content – ASTM D129, D-4294, or D1552.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the sulfur and heat content of the fuel oil are not monitored and recorded.

l. The maximum sulfur content (as SO_2) of any No. 2 and No. 6 fuel oil received and burned in the boiler shall not exceed 0.8 pounds per million Btu. The Permittee is required to calculate and record in a logbook (written or electronic format) the pounds of sulfur dioxide per million Btu heat content of the fuel oil per month.
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the results show an exceedance of the limit given above or if the requirements above are not monitored and recorded.

Monitoring / Recordkeeping [15A NCAC 02D .0524, 02Q .0508(f)]

m. As allowed per 40 CFR 60.45(b)(3) the Permittee has demonstrated that emissions of nitrogen oxides are less than 70 percent of the applicable standards in 40 CFR 60.44, and a continuous monitoring system for measuring nitrogen oxides emissions is not required pursuant to NSPS Subpart D.

Reporting [15A NCAC 02D .0524, 02Q .0508(f)]

n. The Permittee shall submit a summary report of the information listed below postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.
   i. The monitoring and recordkeeping in Section 2.1 U.2.e through U.2.f, above;
   ii. The excess emissions and monitoring systems performance reports for the continuous opacity monitoring system in Section 2.1 U.2.g through U.2.i, above; and
   iii. The fuel suppliers' certifications and calculations of the pounds of sulfur dioxide per million Btu heat content of each fuel per month in Section 2.1 U.2.j through U.2.m, above.

3. 15A NCAC 02D .0614: COMPLIANCE ASSURANCE MONITORING

a. For the electrostatic precipitator **(ID No. 11-CD-006-01)** associated with the No. 4 Power Boiler **(ID No. G11040)**, the Permittee shall comply with 40 CFR part 64 pursuant to 15A NCAC 02D .0614 to ensure that the power boiler complies with the emission limits of 15A NCAC 02D .0530.

Background

b. Emission Units: No. 4 Power Boiler **(ID No. G11040)**

c. Applicable Regulation, Emission Limitation, and Monitoring Requirements
   i. Regulation: 15A NCAC 02D .0530: Prevention of Significant Deterioration

ii. Emission Limits:
PM: 0.085 lb/million Btu

iii. Control Technology: Electrostatic precipitator (ESP)

Monitoring Approach

d. The key elements of the monitoring approach for particulate matter, including parameters to be monitored, parameter ranges and performance criterial are presented in the following table.

Measure	Indicator
I. Indicator	Opacity of ESP exhaust
Measuring approach	Continuous opacity monitoring system (COMS) in ESP exhaust
Indicator Range	The opacity indicator range is a 3-hour block average opacity of 9.6 percent. An excursion occurs when the 3-hour block average measurement is greater than the indicator range. The excursion triggers corrective action and reporting requirement. The QIP threshold is when the total duration of excursions is greater than 5 percent of the source operating time during any 6-month period. The QIP shall be prepared as required under 40 CFR 64.8.
III. Performance Criteria	
Data Representativeness	The COMS was installed at a representative location in the recovery furnace ESP exhaust stack per 40 CFR 60, Appendix B, Performance Specification (PS-1)
QA/QC Practices and Criteria	The COMS was initially installed and evaluated per PS-1. Zero and span drift are checked daily and a quarterly filter audit is performed.
Monitoring Frequency	The opacity of the ESP exhaust is monitored continuously (every 10 seconds)
Data Collection Procedures	The data acquisition system shall retain all 6-minute data and 3-hour block averages according to PS-1.
Averaging Period	The 10-second opacity data are used to calculate the 6-minute averages. The 6-minute averages are used to calculate the 3-hour block average.

Reporting [15A NCAC 02Q .0508(f) and 40 CFR 64.9(a)]

e. The Permittee shall submit a summary report of all monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. In addition, the summary report shall contain the following information, as applicable:

i. Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
ii. Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
iii. A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the Permittee shall include, in the next summary report, documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances.

V. Riley Bark Boiler (ID No. G11042) – with partial flyash reinjection and grate fire ignition (kerosene and rags), equipped with a multicyclone (ID No. 11-CD- 016-01) in series with a venturi-type wet scrubber (ID No. 11-CD-016-02)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	0.16 pounds per million Btu heat input (when firing coal/ fuel oil only); 0.31 pounds per million Btu heat input (when firing woodwaste only); or Ec = [(0.31)(Qw) + (0.16)(Qo)]/Qt Where; Ec = emission limit for combined firing (pound per mmBtu); Qw=actual wood heat input including woodwaste; Qo=actual heat input other than wood heat input; and Qt = Qw + Qo	15A NCAC 02D .0503 15A NCAC 02D .0504
Sulfur dioxide	2.3 lb/million Btu heat input Monitoring Requirements	15A NCAC 02D .0516 15A NCAC 02D .0608
Nitrogen oxides	1.8 lb/million Btu heat input (when firing coal only); 0.8 lb/million Btu heat input (when firing oil only); or E=[(Ec)(Qc) + (Eo)(Qo)]/Qt Where: E = emission limit for combined burning of coal and oil in pounds per million Btu heat input Ec = 1.8 pounds per million Btu heat input for coal only Eo = 0.8 pounds per million Btu heat input for oil only Qc = coal heat input in Btu per hour Qo = oil heat input in Btu per hour; and Qt = Qc + Qo	15A NCAC 02D .0519
Visible emissions	40 percent opacity	15A NCAC 02D .0521
Visible emissions	Excess Emissions Monitoring Requirements (40 CFR 51, Appendix P)	15A NCAC 02D .0606
Particulate matter	Compliance assurance monitoring	15A NCAC 02D .0614
Hazardous air pollutants	See Section 2.2 E	15A NCAC 02D .1109 Case-by-case MACT

1. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

a. Emissions of particulate matter from the combustion of coal and fuel oil that are discharged from this boiler **(ID No. G11042)** into the atmosphere shall not exceed 0.16 pound per million Btu heat input.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 V.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

c. To ensure compliance, the Permittee shall follow the monitoring, recordkeeping, and reporting requirements per Section 2.1 V.2.c through V.2.g, below. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503 if the monitoring and recordkeeping is not maintained.

2. 15A NCAC 02D .0504: PARTICULATES FROM WOOD BURNING INDIRECT HEAT EXCHANGERS

a. Emissions of particulate matter from this boiler **(ID No. G11042)** shall not exceed an allowable emission rate as calculated by the following equation:

$$Ec = [(0.31)(Qw) + (0.16)(Qo)]/Qt$$

Where; Ec = emission limit for combined firing (pound per million Btu);
Qw = actual wood heat input including woodwaste;
Qo = actual heat input other than wood heat input; and
Qt = Qw + Qo

Testing [15A NCAC 02Q .0508(f)]

b. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit(s) above by testing the boiler **(ID No. G11042)** annually for particulate matter with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in General Condition JJ. If the results of the testing demonstrate that emissions are less than 80 percent of the limit in Section 2.1 V.2.a, above, the testing frequency may be reduced to every five years. If the results of this or any test are above the limit given in Section 2.1 V.2.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0504 and the Permittee shall resume performance testing on an annual basis, beginning no more than 12 months after the previous test.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

c. Particulate matter emissions from the boiler shall be controlled by the multicyclone and venturi-type wet scrubber. The Permittee shall install, operate, and maintain a wet scrubbing liquid flowmeter and pressure drop indicator on the scrubber. To ensure compliance and the effective operation of the scrubber, the Permittee shall continuously monitor and record scrubbing liquid flow rate and pressure drop on a 3-hour block average. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0504 if the scrubber is not installed, operated and maintained as required.

d. The scrubber parameter monitoring system downtime shall not exceed two (2) percent of the monitoring time in any semi-annual reporting period. If the emission source(s) is not operating, a record of this fact along with the corresponding date and time shall substitute for the observation. The readings shall be recorded in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. To ensure quality, the flow rate gauges or devices shall be calibrated annually. The scrubber shall be operated to ensure the following operational parameters are maintained:
   i. The pressure drop across the scrubber shall be greater than 4 inches water column, and
   ii. The scrubbing liquid flow rate shall be greater than 450 gallons per minute.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0504 if the scrubbing liquid flow rate or pressure drop is not maintained above the above prescribed value(s) or if these records are not maintained.

e. If the scrubber liquid flow rate or pressure drop readings recorded as required in Section 2.1 V.2.d, above, are observed to be outside the prescribed range, the Permittee shall inspect the scrubber(s) for malfunctions and clean or repair, as necessary. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0504 if the inspections, cleaning, and repairs are not performed.

f. The results of inspection and maintenance activities, discussed above for the scrubbers, shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative of DAQ upon request. The logbook shall record the following:
   i. the date and time of each recorded action
   ii. the results of each inspection;
   iii. the causes for any variance from the prescribed operating range for the scrubbers(s); and
   iii. corrective actions taken.
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0504 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

g. The Permittee shall submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of noncompliance from the requirements of this permit must be clearly identified.

3. 15A NCAC .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from this boiler **(ID No. G11042)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .0508(f) and 02D .0608]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 V.3.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f), and 02D .0608]

c. To ensure compliance with Section 2.1 V.3.a, the Permittee shall monitor the sulfur content and heat content of the coal by using coal supplier certification per total shipment received. The results of the coal supplier certifications shall be recorded in a logbook (written or electronic format) and include the following information:
   i. the name of the coal supplier;
   ii. a statement verifying that the methods used to determine the maximum sulfur content of the coal was in accordance with the following:
      (A) sampling - ASTM Method D 2234;
      (B) preparation - ASTM Method D 2013;
      (C) gross calorific value (Btu) - ASTM Method D-2015, D-3286, D-1989, or D-5865;
      (D) moisture content - ASTM Method D 3173 or D-2961; and
      (E) sulfur content - ASTM Method D 3177 or ASTM Method D 4239.
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 if the coal supplier certification is not recorded.

d. Additionally, the Permittee is required to calculate and record in a logbook (written or electronic format) the equivalent emission rate in pounds of sulfur dioxide per million Btu heat content of the coal per total shipment. This equivalent sulfur dioxide emission rate (pounds per million Btu heat input) shall be calculated in accordance with Method 19 of 40 CFR 60, Appendix A, Section 12.6 – Sulfur Retention Credit for Compliance Fuel. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 and 02D .0608 if the requirements above are not monitored and recorded or if the results show an exceedance of the limit given in Section 2.1 V.3.a, above.

Reporting [15A NCAC 02Q .0508(f) and 02D .0608]

e. The Permittee shall submit a summary report of the coal supplier certifications and calculated emission rates postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 02D .0519: CONTROL OF NITROGEN OXIDES EMISSIONS

a. Emissions of nitrogen oxides from this boiler **(ID No. G11042)** when burning coal and oil shall be calculated by the following equation:

$$E = [(Ec)(Qc) + (Eo)(Qo)]/Qt$$

where: E = emission limit for combined burning of coal and oil in pounds per million Btu heat input
Ec = 1.8 pounds per million Btu heat input for coal only
Eo = 0.8 pounds per million Btu heat input for oil only
Qc = coal heat input in Btu per hour
Qo = oil heat input in Btu per hour; and
Qt = Qc + Qo

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 V.4.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0519.

c. **Monitoring/Recordkeeping** [15A NCAC 02Q .0508(f)]
No monitoring recordkeeping or reporting is required for the burning of coal or oil in this source.

5. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from this boiler **(ID No. G11042)** shall not be more than 40 percent opacity (except during startups) when averaged over a six-minute period except that six-minute periods averaging not more than 90 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.

Testing [15A NCAC 02Q .0508(f)]

b. Under the provisions of NCGS 143-215.108, in order to demonstrate continuous compliance with the opacity limit above, the Permittee shall test the boiler **(ID No. G11042)** for particulate matter and opacity with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in General Condition JJ. Testing shall be completed and the results submitted January 26, 2016, unless an alternate date is approved by the DAQ. The testing shall be conducted as follows:
   i. The Permittee shall conduct a minimum of three one-hour performance test runs on the boiler **(ID No. G11042)** to demonstrate compliance with PM and opacity limits simultaneously using EPA Reference Method 5/202 and EPA Reference Method 9, respectively.
   ii. The Permittee shall collect pressure drop and liquid flow rate data every 15 minutes during the entire period of the performance test.
   iii. The Permittee shall determine the average pressure drop and liquid flow rate for each individual test run in the 3-run performance test by computing the average of all the 15-minute readings taken during each test run.
   iv. The three-hour block average during any performance test that shows compliance with the emission limit in Section 2.1 V.5.a, above, shall be used to establish minimum scrubber liquid flow rate (gallons per minute) and minimum scrubber pressure drop (inches of water). These parametric values shall be reviewed and approved by the DAQ.
   v. In no case shall the minimum scrubber liquid flow rate or minimum pressure drop operating limits be less than the scrubber parameters established under Section 2.1 V.2.c, above.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if the testing is not performed according to these requirements.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

c. The Permittee shall install, operate, and maintain a wet scrubbing liquid flow meter and pressure drop indicator on the scrubber. To ensure compliance and the effective operation of the scrubber, the Permittee shall continuously monitor and record scrubbing liquid flow rate and pressure drop on a 3-hour block average. The scrubber parameter monitoring system downtime shall not exceed two (2) percent of the monitoring time in any semi-annual reporting period. If the emission source(s) is not operating, a record of this fact along with the corresponding date and time shall substitute for the observation. The readings shall be recorded in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. To ensure quality, the flow rate gauges or devices shall be calibrated annually. If the Permittee reevaluates compliance with the emission limit in Section 2.1 V.5.a, above. at parameter ranges outside of those in Section 2.1 V.5.c, below, the

Permittee shall, upon approval by the DAQ, attach the approval memo containing the revised operating parameters to this permit and maintain the parameters in the associated operating ranges contained therein.

d. The Permittee shall operate the scrubber such that the following operating limits are met:
   i. The pressure drop across the scrubber shall be greater than 12.4 inches of water column (3-hour average), and
   ii. The scrubbing liquid flow rate shall be greater than 621 gallons per minute (3-hour average).
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if the scrubbing liquid flow rate or pressure drop is not maintained above the above prescribed value(s) or if these records are not maintained. The established continuous compliance monitoring parameters shall not apply during any required subsequent testing.

e. If the scrubber liquid flow rate or pressure drop readings recorded as required in Section 2.1 V.5.d, above, are observed to be outside the prescribed range, the Permittee shall inspect the scrubber(s) for malfunctions and clean or repair, as necessary. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if the inspections, cleaning, and repairs are not performed.

f. The results of inspection and maintenance activities, discussed above for the scrubber, shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative of DAQ upon request. The logbook shall record the following:
   i. the date and time of each recorded action
   ii. the results of each inspection;
   iii. the causes for any variance from the prescribed operating range for the scrubbers(s); and
   iv. corrective actions taken.
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0504 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

g. The Permittee shall submit a summary report of the monitoring and recordkeeping activity postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

6. 15A NCAC 02D .0606: SOURCES COVERED BY APPENDIX P OF 40 CFR PART 51 (CONTINUOUS OPACITY MONITORING AND EXCESS EMISSIONS)

For the Riley Bark boiler **(ID No. G11042)** the provisions of 15A NCAC 02D .0606 apply as follows:

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f) and 02D .0606]

a. The Permittee shall comply with the continuous opacity monitoring and excess emissions requirements by monitoring scrubber liquid flow rate and scrubber pressure drop as specified in Section 2.1 V.5, above. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0606 if the scrubber liquid flow rate and pressure drop are not monitored as required.

b. The quarterly excess emissions (EE) reports required under Appendix P of 40 CFR Part 51 shall be used as an indication of good operation and maintenance of the multicyclone and scrubber. Any periods of noncompliance with the scrubber operating limits established in Section 2.1 V.5.d, above, shall be considered an exceedance of the opacity standard.

Reporting [15A NCAC 02Q .0508(f) and 02D .0606]

c. The Permittee shall submit the excess emissions and monitor downtime reports as required under Appendix P of 40 CFR Part 51 no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. For periods of excess emissions, defined as periods of noncompliance with from the scrubber operating limits, shall be reported as described in Paragraphs 4 and 5.1 of Appendix P of 40 CFR Part 51. All periods of noncompliance with the requirements of this permit must be clearly identified.

7. 15A NCAC 02D .0614: COMPLIANCE ASSURANCE MONITORING

a. For the venturi-type wet scrubber **(ID No. 11-CD-016-02)** associated with the Riley Bark Boiler **(ID No. G11042)**, respectively, the Permittee shall comply with 40 CFR part 64 pursuant to 15A NCAC 02D .0614 to ensure that boiler complies with the emission limits of 15A NCAC 02D .0508.

Background

b. Emission Units: Riley Bark Boiler **(ID No. G11042)**

c. Applicable Regulation, Emission Limitation, and Monitoring Requirements:

i. Regulation: 15A NCAC 02D .0503: Particulates from Fuel Burning Indirect Heat Exchangers
15A NCAC 02D .0504: Particulates from Wood Burning Indirect Heat Exchangers

ii. Emission Limits:

PM: 0.16 pounds per million Btu heat input (when firing coal/ fuel oil only);
0.31 pounds per million Btu heat input (when firing woodwaste only); or

Ec = [(0.31)(Qw) + (0.16)(Qo)]/Qt
Where;
Ec = emission limit for combined firing (pound per mmBtu);
Qw = actual wood heat input including woodwaste;
Qo = actual heat input other than wood heat input; and
Qt = Qw + Qo

iii. Control Technology: venturi-type wet scrubber

Monitoring Approach

d. The key elements of the monitoring approach for particulate matter, including parameters to be monitored, parameter ranges and performance criterial are presented in the following table.

Measure	Indicator
I. Indicator	Scrubber pressure drop and total liquid flow rate
Measuring approach	Install pressure drop and liquid flow rate continuous monitors
II. Indicator Range[a]	Pressure drop indicator range: minimum 3-hour average of 12.4 inches of H_2O Scrubbing liquid flow rate indicator range: minimum 3-hour average 621 gallons per minute An excursion occurs when the 3-hour average measurement is less than the indicator range. The excursion triggers corrective action and reporting requirement. No more than one excursion will be attributed in any given 24-hour period. The QIP threshold is when the total duration of excursions is greater than 5 percent of the source operating time during any 6-month period. The QIP shall be prepared as required under 40 CFR 64.8.

Measure	Indicator
III. Performance Criteria	
Data Representativeness	Pressure drop tabs installed before and after the scrubber. Flow measurement devices located prior to liquid injection point.
QA/QC Practices and Criteria	Conform to EPA PS-1
Monitoring Frequency	Continuous pressure drop and flow measurements; minimum of one value every 15 minutes of operating time, excluding periods of monitoring downtime and required QA/QC.
Data Collection Procedures	The data acquisition system shall retain all 15-minute data and 3-hour block averages.
Averaging Period	The 15-minute pressure drop and liquid injection rate data are used to calculate the 3-hour block average.

[a] During performance testing, the established continuous compliance monitoring parameters shall not apply. Performance tests will serve to provide the monitoring during these periods.

Reporting [15A NCAC 02Q .0508(f) and 40 CFR 64.9(a)]

e. The Permittee shall submit a summary report of all monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. In addition, the summary report shall contain the following information, as applicable:
   i. Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
   ii. Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
   iii. A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the Permittee shall include, in the next summary report, documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances.

W. Boiler Fuel Feed and Flyash Handling Systems:

- **Riley Bark Boiler Fuel Feed System and Associated Transfer Cyclone (ID No. G11044);**
- **Utility Boiler Flyash Handling System Main Flyash Silo and Pneumatic Flyash Collection System with associated cyclone separator (ID No. G11045), equipped with one bin vent bagfilter (ID No. 11-CD-021-01) and one bagfilter (ID No. 11-CD-021-02):**
- **No. 4 Power Boiler Flyash Transfer Silo (ID No. G11025), equipped with one bin vent bagfilter (ID No. 11-CD-021-03)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E = 4.10\ P^{0.67}$ where: E = allowable particulate emission rate in pounds per hour P = process weight rate in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Particulate matter	Compliance assurance monitoring	15A NCAC 02D .0614

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from each of these systems **(ID Nos. G11044, G11045, and G11025)** shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.W.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

c. Particulate matter emissions from the Utility boiler flyash handling system and No. 4 power boiler flyash handling system **(ID Nos. G11045 and G11025)** shall be controlled by their respective bin vent bagfilters and the pneumatic system dust separator cyclone with bagfilters **(ID Nos. 11-CD-021-01, 11-CD-021-02, and 11-CD-021-03)** as described above. To ensure compliance, the Permittee shall perform inspections and maintenance. As a minimum, the inspection and maintenance requirement shall include the following:
   i. a monthly visual inspection (for each calendar month, not to exceed 6 weeks from the previous inspection) of the system ductwork and material collection unit for leaks; and
   ii. an annual internal inspection (for each calendar year, not to exceed 14 months from the previous inspection) of the bagfilters' and cyclones' structural integrity.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork, bagfilters, and cyclones are not inspected and maintained.

d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. the results of any maintenance performed on the bagfilters or cyclones; and
   iv. any corrections made.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit the results of any maintenance performed on the bagfilters or cyclones within 30 days of a written request by the DAQ.

f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from these systems (**ID Nos. G11044, G11045 and G11025)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in 2.1 W.2.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

c. To ensure compliance, once a month the Permittee shall observe the emission points of these systems (**ID Nos. G11044, G11045, and G11025)** for any visible emissions above normal. The observation must be made each month of the calendar year period to ensure compliance with this requirement. If visible emissions from any source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 W.2.a, above.

   If the above-normal emissions are not corrected per (i) above or if the demonstration per (ii) above cannot be made, the Permittee shall be deemed in noncompliance with 15A NCAC 02D.0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be above normal along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 02D .0614: COMPLIANCE ASSURANCE MONITORING

a. For the fabric filters **(ID Nos. 11-CD-021-01, 11-CD-021-02, and 22-CD-021-03)** associated with the Utility Boiler Flyash Handling System and No. 4 Power Boiler Flyash Handing Systems **(ID Nos. G11045 and G11025)**, the Permittee shall comply with 40 CFR part 64 pursuant to 15A NCAC 02D .0614 to ensure that the flyash handling system complies with the emission limits of 15A NCAC 02D .0515 and 15A NCAC 02D .0521.

Background

b. Emission Units:
   i. Utility Boiler Flyash Handling System **(ID No. G11045)**.
   ii. No. 4 Power Boiler Flyash Handling Systems **(ID Nos. G11025)**.

c. Applicable Regulation, Emission Limitation, and Monitoring Requirements
   i. Regulations: 15A NCAC 02D .0515: Particulates from Miscellaneous Industrial Processes

ii. Emission Limits: Particulate matter emissions shall not exceed the limits calculated using the following equations.

$E = 4.10 \times P^{0.67}$
Where:
E = allowable emission rate in pounds per hour
P = process weight in tons per hour ($P \leq 30$ tons per hour)

$E = 55(P)^{0.11} - 40$
Where:
E = allowable emission rate in pounds per hour
P = process weight in tons per hour ($P > 30$ tons per hour)

iii. Control Technology: Bagfilters

Monitoring Approach

d. The key elements of the monitoring approach for particulate matter, including parameters to be monitored, parameter ranges and performance criterial are presented in the following table.

Measure	Indicator
I. Indicator	Visible emissions (VE)
Measuring approach	Visible emissions from each baghouse will be observed daily using EPA Reference Method 22-like procedures
II. Indicator Range	An excursion is defined as the present of visible emissions. Excursion triggers a demonstration of compliance with the 20 percent opacity standard in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes; or an inspection, corrective action, and a reporting requirement. The QIP threshold is excursions occurring on three days (consecutive or non-consecutive days) in a six-month reporting period for which the Permittee did not perform a demonstration of compliance with the 20 percent opacity standard in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes. The QIP shall be prepared within 30 days of reaching the QIP threshold and shall contain procedures for evaluating control performance problems.
III. Performance Criteria	
Data Representativeness	Visible emissions shall be observed at the emission point (baghouse exhaust)
QA/QC Practices and Criteria	The observer shall be familiar with EPA Reference Method 22 and follow Method 22-like procedures when VE is observed. Method 9 observations shall be conducted by a certified Reference Method 9 observer.
Monitoring Frequency	A VE observation shall be performed daily, when operating.
Data Collection Procedures	The VE observation recorded by the observer.
Averaging Period	N/A

Reporting [15A NCAC 02Q .0508(f) and 40 CFR 64.9(a)]

e. The Permittee shall submit a summary report of all monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the

requirements of this permit must be clearly identified. In addition, the summary report shall contain the following information, as applicable:

i. Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
ii. Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
iii. A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the Permittee shall include, in the next summary report, documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances.

PAPER MACHINES (AREA 12)

X. Four Paper Machines:

- **No. 20 Paper Machine (ID No. G12048);**
- **No. 19 Paper Machine (ID No. G12049);**
- **No. 12 Paper Machine (ID No. G12050); and**
- **No. 11 Paper Machine (ID No. G12051)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulations
Toxic Air Pollutants	State Enforceable Only (See Section 2.3 A.)	15A NCAC 02D .1100

CHEMICAL PREPARATION (AREA 13)

Y. Three starch storage silos:

- **East starch storage silo (ID No. G13054) – 30 tons per hour maximum throughput, controlled by a bagfilter (ID No. 13-CD-014-01);**
- **West starch storage silo (ID No. G13055) – 30 tons per hour maximum throughput, controlled by a bin vent filter (ID No. 13-CD-016-01); and**
- **Center starch storage silo (ID No. G13056) – 30 tons per hour maximum throughput, controlled by a 255 square feet of filter area bagfilter (ID No. 13-CD-020-01).**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate	$E = 4.10\ P^{0.67}$ where: E = allowable particulate emission rate in pounds per hour P = process weight rate in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from each of the starch silos **(ID Nos. G13054, G13055, and G13056)** shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 Y.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

c. Particulate matter emissions from the starch silos (**ID Nos. G13054, G13055, and G13056**) shall be controlled by the bagfilters and bin vent filter as described above. To ensure compliance, the Permittee shall perform inspections and maintenance. As a minimum, the inspection and maintenance requirement shall include the following:
   i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
   ii. an annual (for each 12-month period following the initial inspection) internal inspection of the bagfilters' and bin vent filter's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork, bagfilters, and bin vent filter are not inspected and maintained.

d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. the results of any maintenance performed on the bagfilters and bin vent filter; and
   iv. any corrections made.
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit the results of any maintenance performed on the bagfilters within 30 days of a written request by DAQ.

f. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from the starch silos **(ID Nos. G13054, G13055, and G13056)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in 2.1 Y.2.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

c. To ensure compliance, once a month the Permittee shall observe the emission points of the starch silos **(ID Nos. G13064, G13055, and G13056)** for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from any source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 Y.2.a, above.
   If the above-normal emissions are not corrected per (i) above or if the demonstration per (ii) above cannot be made, the Permittee shall be deemed in noncompliance with 15A NCAC 02D.0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be above normal along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

WASTEWATER TREATMENT PLANT (AREA 16)

Z. WTP Primary Clarifiers (ID No. G16081) and WTP Aeration and Digestion Basins (ID No. G16082)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits / Standards	Applicable Regulations
Toxic air pollutants	State Enforceable Only (See Section 2.3 A)	15A NCAC 02D .1100

PAPER CONVERTING (AREA 19)

AA. Rewinders on Trim System No. 1 (ID No. G19058) Rewinders on Trim System No. 2 (ID No. G19059)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E = 4.10\ P^{0.67}$ where: E = allowable particulate emission rate in pounds per hour P = process weight rate in tons per hour	15A NCAC 02D .0515
Visible emissions	40 percent opacity	15A NCAC 02D .0521

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from each of the rewinders **(ID Nos. G19058 and G19059)** shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 AA.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

c. The Permittee shall maintain production records such that the process rates "P" in tons per hour, as specified by the formula contained above can be derived, and shall make these records available to a DAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the production records are not maintained or the types of materials are not monitored.

d. No reporting is required for particulate matter emissions from the rewinders on trim systems Nos. 1 and 2 **(ID Nos. G19058 and G19059)**.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from the rewinders **(ID Nos. G19058 and G19059)** shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in 2.1 AA.2.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

c. To ensure compliance, once a month the Permittee shall observe the emission points of the rewinders **(ID Nos. G19058 and G19059)** for any visible emissions above normal. The monthly observations must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from any source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 AA.2.a, above.

   If the above-normal emissions are not corrected per (i) above or if the demonstration per (ii) above cannot be made, the Permittee shall be deemed in noncompliance with 15A NCAC 02D.0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be above normal along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

TURPENTINE RECOVERY (AREA 20)

BB. No. 1 Hardwood Turpentine Recovery System (ID No. G20060) and No. 2 Pine Turpentine Recovery System (ID No. G20062)

Gases are collected via the NCG closed collection system and burned in the No. 4 Lime Kiln (ID No. G09028, primary) or No. 5 Lime Kiln (ID No. G09029, backup).

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous air pollutants	See Section 2.2 C.1	15A NCAC 02D .1111 (40 CFR Part 63, Subpart S)

TALL OIL PRODUCTION (AREA 21)

CC. Tall Oil Reactor (ID No. G21072) controlled by a packed tower-type wet scrubber (ID No. 21-ST-008-01)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Toxic air pollutants	State Enforceable Only (See Section 2.3 A)	15A NCAC 02D .1100

NCG COLLECTION (AREA 23)

DD. No. 1 Fiberline Building Ventilation – Fugitives (ID No. G23066.k)
No. 2 Fiberline Building Ventilation – Fugitives (ID No. G23066.l)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Toxic air pollutants	State Enforceable Only (See Section 2.3 A)	15A NCAC 02D .1100

MISCELLANEOUS FIRBERLINE (AREA 24)

EE. No. 1 Hardwood Fiberline Deckers (ID No. G24087) and No. 2 Pine Fiberline Deckers (ID No. G24088)

Hardwood Brownstock High Density Storage (ID No. G24092)
Pine Brownstock High Density Storage (ID No. G24094)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous air pollutants	**Affected Sources: G24087 and G24088** See Section 2.2 C.1	15A NCAC 02D .1111 (40 CFR Part 63, Subpart S)
Toxic air pollutants	**Affected Sources: G24092 and G24094** State Enforceable Only (See Section 2.3 A)	15A NCAC 02D .1100

FF. One 1850 horsepower, diesel-fired emergency generator (ID No. 16-CU-001)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur dioxide	2.3 lb/million Btu heat input	15A NCAC 02D .0516
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Hazardous air pollutants	Notification Requirements	15A NCAC 02D .1111 (40 CFR Part 63, Subpart ZZZZ)

1. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from the emergency generator **(ID No. 16-CU-001)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 FF.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

c. No monitoring/recordkeeping is required for sulfur dioxide emissions from diesel fuel firing in the emergency generator **(ID No. 16-CU-001)**.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from the emergency generator **(ID No. 16-CU-001)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 FF.2.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required from the firing of diesel fuel oil in this source for this regulation.

3. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability [40 CFR 63.6585 and 63.6590(a)(2)(i)]

a. For the emergency generator **(ID No. 16-CU-001)** (a new stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart ZZZZ, "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines" and Subpart A "General Provisions."

Stationary RICE subject to limited requirements

b. The emergency generator **(ID No. 16-CU-001)** does not have to meet the requirements of 40 CFR 63 Subpart ZZZZ and Subpart A except for the initial notification requirements of Section 2.1 FF.4.c, below. [40 CFR 63.6590(b)(1)(i)]

Notification Requirements [15A NCAC 02Q. 0508(f)]

c. The Permittee shall submit an initial notification for the emergency generator **(ID No. 16-CU-001)** later than 120 calendar days after construction and include the information in 40 CFR 63.9(b)(2)(i) through (iv) and a statement that the stationary RICE has no additional requirements and explain the basis of the exclusion. [40 CFR 63.6590(b) and 63.6645(c) and (f)]

d. The notification requirements in Section 2.1 FF.3.c, above, were met with the submittal of Permit Application No. 4400159.06B.

GG. Coal Processing and Conveying consisting of the following:

- **Crusher (No. G11052)**
- **Coal Conveying and Storage System Equipment:**
  - **Conveyor System (ID No. G11053) consisting of the following:**
    - **Collecting Conveyor No. 1 (No. 13A-001)**
    - **Receiving Conveyor No. 2 (No. 13A-002)**
    - **Stockpile Conveyor No. 3 (No. 13A-003)**
    - **Overland Conveyor No. 4 (No. 13A-004)**
    - **Overland Conveyor No. 5 (No. 13A-005)**
    - **Transfer Conveyor No. 6 (No. 13A-006)**
    - **Transfer Conveyor No. 7 (No. 13A-007)**
    - **Transfer Conveyor No. 8 (No. 13A-008)**
  - **No. 4 Boiler Bunker (ID No. G11041) equipped with three fabric filters (ID Nos. CD-013-011, CD-013-012 and CD-013-015)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E = 4.10\ P^{0.67}$ where: E = allowable particulate emission rate in pounds per hour P = process weight rate in tons per hour	15A NCAC 02D .0515
Visible emissions	*Coal Processing (ID No. G11052):* 10 percent opacity *Coal Conveying and Storage (ID Nos. G11053 and G11041):* 20 percent opacity	15A NCAC 02D .0524 (40 CFR Part 60, Subpart Y)
Particulate matter	See Section 2.2 A.1	15A NCAC 02D .0530

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from the coal processing and conveying equipment **(ID Nos. G11052, G11053, and G11041)** shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ Where: E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 GG.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

c. Particulate matter emissions from the No. 4 Boiler Coal Bunker **(ID No. G11041**) shall be controlled by the bagfilters **(ID Nos. CD-013-011, CD-013-013, and CD-013-015)**. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
   i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
   ii. an annual (for each 12-month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and bagfilters are not inspected and maintained.

d. The results of inspection and maintenance in Section 2.1 GG.1.c, above, for the No. 4 Boiler Coal Bunker **(ID No. G11041)** shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. the results of any maintenance performed on the bagfilters; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

e. For the uncontrolled coal processing, conveying, and storage equipment **(ID Nos. G11052 and G11053)**, the Permittee shall maintain production records such that the process rates "P" in tons per hour, as specified by the formulas above can be derived, and shall make these records available to a DAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the production records are not maintained or the types of materials are not monitored.

Reporting [15A NCAC 02Q .0508(f)]

f. The Permittee shall submit the results of any maintenance performed on the bagfilters within 30 days of a written request by the DAQ.

g. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60, SUBPART Y)

a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 02D .0524, "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60, Subpart Y, including Subpart A "General Provisions." [15A NCAC 02D .0524]

b. Visible emissions from Coal Processing and Conveying shall be less than the following:
   i. 10 percent opacity from the Crusher **(ID No. G11052);** and
   ii. 20 percent opacity from the Coal Conveying and Storage System Equipment **(ID Nos. G11053 and G11041)** shall be less than. [40 CFR 60.254(b)(1) and 60.254(a)]

Testing/Monitoring [15A NCAC 02Q .0508(f)]

c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ and 40 CFR 60.257. The Permittee shall conduct performance tests on the Crusher **(ID No. G11052)** for opacity as follows [40 CFR 60.255(b)(2)]:
   i. If all 6-minute average opacity readings in the most recent performance test are equal to or less than half the applicable opacity limit, a new performance test must be conducted within 12 calendar months of the date that the previous performance test was required to be completed.
   ii. If any 6-minute average opacity reading in the most recent performance test exceeds half the applicable opacity limit, a new performance test must be conducted within 90 operating days of the date that the previous performance test was required to be completed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the results of this test are above the limit given in Section 2.1 GG.2.b, above, or if the performance tests are not conducted as required.

d. To ensure compliance, once a month, the Permittee shall observe the emission points of the Coal Conveying and Storage System Equipment **(ID Nos. G11052 and G11041)** for any visible emissions above normal. The monthly observations must be made each month of the calendar year period to ensure compliance with this requirement. The Permittee shall establish normal for the first 30 days following the effective date of the permit. If visible emissions from the Coal Conveying and Storage System Equipment **(ID Nos. G11052 and G11041)** are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or

ii. demonstrate that the percent opacity from the Coal Conveying and Storage System Equipment **(ID Nos. G11052 and G11041)** in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 GG.2.b, above.

If the above normal emissions are not corrected per (i), above, or if the demonstration in (ii), above, cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC .0524.

Recordkeeping [15A NCAC 02Q .0508(f)]

e. The Permittee shall maintain a logbook (written or electronic) on-site and make it available upon request. The logbook shall record the following [40 CFR 60.258(a)(1) through (a)(3)]:
   i. The manufacturer's recommended maintenance procedures and the date and time of any maintenance and inspection activities and the results of those activities. Any variance from manufacturer recommendation, if any, shall be noted.
   ii. The date and time of any periodic coal preparation and processing plant visual observations, noting those sources with visible emissions along with corrective actions taken to reduce visible emissions. Results from the actions shall be noted.
   iii. The amount and type of coal processed each calendar month.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

f. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The Permittee shall include following information in each summary report [40 CFR 60.258(b)(3) and (c)]:
   i. All 6-minute average opacity readings that exceed the applicable standards in Section 2.1 GG.2.b, above; and
   ii. The results of initial performance tests consistent with 40 CFR 60.8.

g. Within 60 days after the date of completing each performance evaluation conducted to demonstrate compliance with Section 2.1 GG.2, the Permittee must submit the test data to EPA by successfully entering the data electronically into EPA's WebFIRE data base available at *http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main.* For performance tests that cannot be entered into WebFIRE (*i.e.*, Method 9 of appendix A-4 of this part opacity performance tests) the Permittee shall mail a summary copy to United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; mail code: D243-01; RTP, NC 27711. [40 CFR 60.258(d)]

HH. Nos. 1 and 2 Natural Gas Package Boilers (ID Nos. G11050 and G11051) – equipped with low NO_X burners and oxygen trim systems.

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	0.143 lb/million Btu heat input	15A NCAC 02D .0503
Sulfur dioxide	2.3 lb/million Btu heat input	15A NCAC 02D .0516
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Nitrogen oxides	0.10 lb/million Btu heat input	15A NCAC 02D .0524 40 CFR Part 60, Subpart Db
Hazardous air pollutants	Work Practices	15A NCAC 02D .1111 40 CFR Part 63, Subpart DDDDD
Particulate matter ($PM/PM_{10}/PM_{2.5}$), sulfur dioxide, nitrogen oxides, carbon monoxide, H2SO4, fluorides, TRS, lead, and volatile organic compounds	See Section 2.2 A.4	15A NCAC 02D .0530(u)

1. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

a. Emissions of particulate matter from the combustion of natural gas that are discharged from each of these boilers **(ID Nos. G11050 and G11051)** into the atmosphere shall not exceed 0.143 pounds per million Btu heat input.

Testing [15A NCAC 02Q .0508(f)]

b. If emission testing is required, the testing shall be performed in accordance General Condition JJ. If the results of the test are above the limit given in Section 2.1 HH.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas in these boilers **(ID Nos. G11050 and G11051).**

2. 15A NCAC .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from these boilers **(ID Nos. G11050 and G11051)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 HH.2.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas in these boilers **(ID Nos. G11050 and G11051).**

3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from these boilers **(ID Nos. G11050 and G11051)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 HH.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas in these boilers **(ID Nos. G11050 and G11051)**.

4. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR Part 60, Subpart Db)

a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60, Subpart Db, including Subpart A "General Provisions."[15A NCAC 02D .0524]

Emission Limitations [15A NCAC 02D .0524]

b. Nitrogen oxide emissions shall not exceed 0.10 pounds per million Btu heat input according to the following: [40 CFR 60.44b(a)(1)(i)]
   i. Compliance with the nitrogen oxide emission limits are determined on a 30-day rolling average basis [40 CFR 60.44b(i)].
   ii. The nitrogen oxide emission standards apply at all times [40 CFR 60.46b(a)]

Notifications [40 CFR 60.7 and 60.49b(a)]

c. The Permittee shall submit a notification of the date of initial startup each boiler **(ID Nos. G11050 and G11051)**, postmarked no later than 15 days after initial startup. In the notification of initial startup, the Permittee shall include the design heat capacity of the boiler and identification of the fuels to be combusted in the boiler.

Testing [15A NCAC 02Q .0508(f)]

d. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 HH.4.b, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

e. The Permittee shall conduct an initial performance test for nitrogen oxides on each of the Nos. 1 and 2 Package Boilers **(ID Nos. G11050 and G11051)** as follows:
   i. The Permittee shall conduct the initial performance test within 60 days after achieving the maximum production rate at which each affected boiler will be operated, but not later than 180 days after initial startup of each boilers. [40 CFR 60.8(a) and 60.46b(e)]
   ii. During the initial performance test, the Permittee shall monitor nitrogen oxides emissions for 30 successive boiler operating days and the 30-day average emission rate shall be used to demonstrate compliance with the nitrogen oxides emission standards in Section 2.1 HH.4.b, above. [40 CFR 60.46b(e)(1)]
   iii. The Permittee shall calculate the 30-day average emission rate as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period. [40 CFR 60.46b(e)(1)]

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the initial performance test is not conducted as required above.

Monitoring [15A NCAC 02Q .0508(f)]

f. The Permittee shall install, calibrate, maintain, and operate a CEM system for measuring nitrogen oxides and oxygen (or carbon dioxide) emissions discharged to the atmosphere from the Nos. 1 and 2 Natural Gas Package Boilers **(ID Nos. G11050 and G11051)**, and shall record the output of the system. [40 CFR 60.48b(b)]
   i. The CEMS shall be operated and data recorded during all periods of operation of the boilers **(ID Nos. G11050 and G11051)** except for CEMS breakdowns and repairs. [40 CFR 60.48b(c)]
   ii. Data shall be recorded during calibration checks, and zero and span adjustments. [40 CFR 60.48b(c)]
   iii. The 1-hour nitrogen oxides emission rates measured by the CEM installed on the Nos. 1 and 2 Package Boilers **(ID Nos. G11050 and G11051)** shall be expressed in pounds per million Btu heat input and shall be used to calculate the average emission rates for compliance with Section 2.1 HH.4.b, above. The 1-hour averages shall be calculated using the procedures in 40 CFR 60.13(h)(2). [40 CFR 60.48b(d)]

iv. The Permittee shall follow the procedures under 40 CFR 60.13 for installation, evaluation, and operating of the CEM systems. [40 CFR 60.48b(e)]
v. When nitrogen oxides emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using standby monitoring systems, Method 7 and 3A of 40 CFR Part 60, or other approved reference method to provide emissions data for a minimum of 75 percent of the operating hours in each boiler **(ID Nos. G11050 and G11051)** operating day, in at least 22 out of 30 successive boiler operating days. [40 CFR 60.48b(f)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the monitoring is not conducted as required above.

Recordkeeping [15A NCAC 02Q .0508(f)]

g. The Permittee shall maintain records for a period of two years of the following information for each boiler **(ID Nos. G11050 and G11051)** operating day: [40 CFR 60.49b(g) and (o)]
   i. Calendar date;
   ii. The average hourly nitrogen oxides emission rates (expressed as NO_2), in pounds per million Btu heat input, measured or predicted;
   iii. The 30-day average nitrogen oxides emission rates, in pounds per million Btu heat input, calculated at the end of each boiler operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;
   iv. Identification of the boiler operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards under Section 2.1 HH.4.2, above, with the reasons for such excess emissions as well as a description of corrective actions taken;
   v. Identification of the boiler operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;
   vi. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;
   vii. Identification of "F" factor used for calculations, method of determination, and type of fuel combusted;
   viii. Identification of the times when the pollutant concentration exceeded full span of the CEMS;
   ix. Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with 40 CFR Part 60, Appendix B, Performance Specification 2 or 3; and
   x. Results of daily CEMS drift tests and quarterly accuracy assessments as required under 40 CFR Part 60, Appendix F, Procedure 1.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained as required.

Reporting [15A NCAC 02Q .0508(f)]

h. The Permittee shall submit the performance test data from the initial performance test and the results of the performance evaluation of the CEMS according to the requirements of 40 CFR Part 60, Appendix B. [40 CFR 60.49b(b)]

i. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.
   i. The summary report shall include the information recorded under Section 2.1HH.4.g, above. [40 CFR 49b(i)]
   ii. The Permittee shall include in the summary report any excess emissions that have occurred during the reporting period. Excess emissions are defined as any calculated 30-day rolling average nitrogen oxides emissions rate, calculated under Section 2.1 HH.4.e, above, that exceeds the emission limit in Section 2.1 HH.4.b, above. [40 CFR 49b(h)]

5. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability

a. For the Nos. 1 and 2 Package Boilers **(ID Nos. G11050 and G11051)**, the Permittee shall comply with all applicable provisions for the "unit designed to burn gas 1 subcategory," including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD . "National Emission

Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" and Subpart A "General Provisions."
[40 CFR 63.7485, 63.7490(d), 63.7499(l)]

b. In order for the boilers **(ID Nos. G11050 and G11051)** to be considered in the "unit designed to burn gas 1 subcategory," the Permittee shall only burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, and during periods of gas curtailment or gas supply interruptions of any duration. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the No. 2 fuel oil is burned in the boilers **(ID Nos. G11050 and G11051)** for periodic testing of liquid fuel, maintenance or operator training for more than 48 hours during any calendar year or if No. 2 fuel oil is burned in the boilers **(ID Nos. G11050 and G11051)** during any periods other than gas curtailment or gas supply interruption. [40 CFR 63.7575]

Definitions and Nomenclature [40 CFR 63.7575]

c. For the purpose of Section 2.1 HH.5, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

40 CFR Part 63, Subpart A - General Provisions [40 CFR 63.7565]

d. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A, General Provisions, according to the applicability of Subpart A to such sources as identified in Table 10 to 40 CFR Part 63, Subpart DDDDD.

Compliance Date [40 CFR 63.7495]

e. The Permittee shall comply with the requirements of this section for the boilers **(ID Nos. G11050 and G11051)** upon startup. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the compliance date is not met.

Notifications [40 CFR 63.7545(c)]

f. As specified in 40 CFR 63.9(b)(4) and (5), the Permittee shall submit an Initial Notification not later than 15 days after the actual date of startup of the boilers **(ID Nos. G11050 and G11051)**.
The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the Initial Notification is not submitted.

g. The Permittee shall submit a Notification of Compliance Status for the boilers **(ID Nos. G11050 and G11051)**. The notification must be signed by a responsible official and postmarked before the close of business within 60 days of the compliance date specified in Section 2.1 HH.5.e, above. The notification shall contain the following:
   i. A description of the boilers **(ID Nos. G11050 and G11051)**, including a statement that the boilers are in "the unit designed to burn gas 1 subcategory," the design heat input capacity of the boilers, and description of the fuel(s) burned.
   ii. A signed certification that the facility completed the required initial tune-up for all of the boilers covered by 40 CFR Part 63, Subpart DDDDD and at this site according to the procedures Section 2.1 HH.5.j, below. [40 CFR 63.7545(e)(8) and 63.7530(e), and (f)]

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the Notification of Compliance Status is not submitted.

h. The Permittee shall submit a notification of intent to fire an alternative fuel within 48 hours of the declaration of each period of natural gas curtailment or supply interruption. The notification must include the following information:
   i. Company name and address;
   ii. Identification of the affected boiler;
   iii. Reason the Permittee is unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared or the natural gas supply interruption began;
   iv. The type of alternative fuel the Permittee intends to use; and
   v. Dates when the alternative fuel use is expected to begin and end.

   [40 CFR 63.7545(f)]
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the notification of intent to fire an alternative fuel is not submitted.

General Compliance Requirements

i. The Permittee shall comply with the work practice standards in Section 2.1 HH.5.j, below at all times the boilers **(ID Nos. G11050 and G11051)** are operating. [40 CFR 63.7500(f) and 63.7505(a)]

Work Practice Standards [15A NCAC 02Q .0508(f)]

j. The Permittee shall conduct a tune-up of the boilers **(ID Nos. G11050 and G11051)** as specified below. The Permittee shall conduct the tune-up while burning the type of fuel that provided the majority of the heat input to the boiler of the 12 months prior to the tune-up.
   i As applicable, the Permittee shall inspect the burner, and clean or replace any components of the burner as necessary. The Permittee may perform the burner inspection at any time prior to the tune-up or delay the burner inspection until the next scheduled or unscheduled shutdown, but each burner must be inspected at least once every 72 months.
   ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
   iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly. The Permittee may delay the inspection until the next scheduled unit shutdown.
   iv. Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject.
   v. Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
   vi. The oxygen level shall be set no lower than the oxygen concentration measured during the most recent tune-up.
   [40 CFR 63.7500(a) and 63.7540(a)(10)]

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these work practice standards are not met.

k. The tune-ups for the Nos. 1 and 2 Package Boilers **(ID Nos. G11050 and G11051)** shall be conducted according to the following schedule. [Table 3 of Subpart DDDDD]
   i. The initial tune-up for the boilers **(ID Nos. G11050 and G11051)** shall be no later than 61 months after initial startup of the unit. [40 CFR 63.7510(g) and 63.7515(d)]
   ii. Subsequent tune-ups for each boiler **(ID Nos. G11050 and G11051)** shall be conducted every five years and no more than 61 months after the previous tune-up. [40 CFR 63.7540(a)(12), 63.7515(d)]
   iii. The tune-up for each boiler **(ID Nos. G11050 and G11051)** may be delayed until the next scheduled or unscheduled unit shutdown, but the Permittee shall inspect each burner at least once every 72 months. [40 CFR 63.7540(a)(12)]

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the initial and subsequent tune-ups are not conducted as specified.

l. If the boilers **(ID Nos. G11050 and G11051)** are not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. [40 CFR 63.7515(g) and 63.7540(a)(13)]
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the delayed tune-up is not conducted within 30 calendar days of startup.

m. At all times, the Permittee shall operate and maintain the boilers, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to DAQ that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.7500(a)(3)]
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the boiler is not operated in a manner consistent with safety and good air pollution control practices for minimizing emissions.

Recordkeeping Requirements [15A NCAC 02Q .0508(f)]

n. The Permittee shall keep the following records:
   i. A copy of each notification and report submitted to comply with Section 2.1 HH.5, including all documentation supporting any Initial Notification or Notification of Compliance Status, or compliance report that has been submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv). [40 CFR 63.7555(a)(1)]
   ii. A report, maintained on-site and submitted to DAQ if requested, containing the information in paragraphs (A) through (C) below [40 CFR 63.7540(a)(10)(vi)]:
      (A) The concentrations of carbon monoxide in the effluent stream of each boiler **(ID Nos. G11050 and G11051)** in parts per million by volume, and oxygen in volume percent, measured before and after the tune-ups of the boilers **(ID Nos. G11050 and G11051)**;
      (B) A description of any corrective actions taken as a part of the tune-up; and
      (C) The type and amount of fuel used over the 12 months prior to the tune-ups, but only if the boilers were physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
   iii. The associated records for compliance with the work practice standards in Section 2.1 HH.5.i through GG.5.m, above, including the occurrence and duration of each malfunction of operation (i.e., process equipment) or the required air pollution control and monitoring equipment. [40 CFR 63.10(b)(2)]
   iv. Records of the total hours per calendar year that alternative fuel is burned in the boilers **(ID Nos. G11050 and G11051)** and the total hours per calendar year that the boilers operated during periods of gas curtailment or gas supply emergencies. [40 CFR 63.7555(h)]

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these records are not maintained.

p. The Permittee shall:
   i. maintain records in a form suitable and readily available for expeditious review;
   ii. keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
   iii. keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if records are not maintained as specified above. [40 CFR 63.7560 and 63.10(b)(1)]

Reporting Requirements [15A NCAC 02Q .0508(f)]

q. The Permittee shall submit compliance reports to the DAQ every five years. The first report shall cover the period beginning on the compliance date specified in Section 2.1 HH.5.e, above, and ending on December 31 within five years after the compliance date in Section 2.1 HH.5.e, above. Subsequent reports shall cover the five-year periods from January 1 to December 31. The compliance reports shall be postmarked on or before January 31. [40 CFR 63.7550(a), (b) and 63.10(a)(4), (5)]

r. The Permittee shall submit the 5-year compliance report via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange, CDX.) The Permittee shall use the appropriate electronic report in CEDRI 40 CFR Part 63, Subpart DDDDD. Instead of using the electronic report in CEDRI for this 40 CFR Part 63, Subpart DDDDD, the Permittee may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (http://www.epa.gov/ttn/chief/cedri/index.html), once the XML schema is available. If the reporting form specific to 40 CFR Part 63, Subpart DDDDD is not available in CEDRI at the time that the report is due, the Permittee shall submit the report to DAQ. The Permittee shall begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. [40 CFR 63.7550(h)(3)]

s. The Permittee shall include the following information in the 5-year compliance report:
   i. Company and facility name and address;
   ii. Process unit information, emissions limitations, and operating parameter limitations;
   iii. Date of report and beginning and ending dates of the reporting period;
   iv. The date of the most recent tune-up for each boiler **(ID Nos. G11050 and G11051)** required according to Section 2.1 HH.5.j. Include the date of the most recent burner inspection if it was not done as scheduled and was delayed until the next scheduled or unscheduled unit shutdown; and

v. If there are no periods of noncompliance from the requirements of the work practice requirements in Section 2.1 HH.5.j, above, a statement that there were no deviations from the work practice standards during the reporting period.

[40 CFR 63.7550(a) and (c)(1), (c)(5)(i) through (iii), (c)(5)(xiv), (c)(5)(xvii), and Table 9]

t. If the Permittee has a period of noncompliance with a work practice standard for periods of startup and shutdown during the reporting period, the compliance report must also contain the following information:
   i. A description of the period of noncompliance and which work practice standard from which the Permittee was in noncompliance; and
   ii. Information on the number, duration, and cause of periods of noncompliance (including unknown cause), as applicable, and the corrective action taken.

   [40 CFR 63.7540(b), 63.7550(a) and (d) and Table 9]

2.2- Multiple Emission Sources Specific Limitations and Conditions

A. Prevention of Significant Deterioration (PSD):

1. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 02D .0530, "Prevention of Significant Deterioration of Air Quality" as promulgated in 40 CFR 51.166.

Operations Restrictions [15A NCAC 02D .0530]

b. The Permittee shall meet the following requirements on the No. 4 Power Boiler **(ID No. G11040)**:
   i. a dust suppression system and enclosed conveyor system for feeding coal to the No. 4 Power Boiler **(ID No. G11040)** shall be installed and maintained;
   ii. the No. 4 Power Boiler **(ID No. G11040)** design shall incorporate low excess air in the primary combustion zone and staged combustion, and tangential firing to control NO_X emissions;
   iii. the coal fuel shall be low sulfur coal (as required in Section 2.1 U.2.j, above), and the NSPS limits in Section 2.1 U.2.b, above, for sulfur dioxide and nitrogen oxides shall apply;
   iv. the particulate matter emissions from the No. 4 Power Boiler **(ID No. G11040)** shall be limited to 0.085 pounds per million Btu;
   v. the steam production from the utility boilers shall be limited as follows:
      (A) Big Bill (**ID No. G11037**) shall be limited to no more than 274,000 lb steam/hr (364 million Btu per hour heat input);
      (B) Peter G **(ID No. G11038**) shall be limited to no more than 274,000 lb steam/hr (364 million Btu per hour heat input); and
      (C) Riley Coal (**ID No. G11039**) shall be limited to no more than 300,000 lb steam/hr (399 million Btu per hour heat input)
   vi. boilers Big Bill (**ID No. G11037**), Peter G **(ID No. G11038**), and Riley Coal (**ID No. G11039**) shall be limited to particulate matter emissions of no more than 0.15 pounds per million Btu, each;
   vii. nitrogen oxide emissions from boilers Big Bill, Peter G, Riley Coal, and No. 4 Power Boiler **(ID Nos. G11037, G11038, G11039, and G11040)** shall be limited to 4,368 tons per 12-month rolling total; and
   viii. carbon monoxide emissions from boiler Big Bill, Peter G, Riley Coal, and No. 4 Power Boiler **(ID Nos. G11037, G11038, G11039, and G11040)** shall be limited to 898.2 tons per 12-month rolling total.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if any of these operational restrictions are exceeded.

Emissions Limitations [15A NCAC 02D .0530]

c. The Permittee shall meet the following emissions limitations:
   i. particulate matter emissions from the No. 4 Power Boiler **(ID No. G11040)** shall be limited to no more than 0.085 pounds per million Btu;
   ii. particulate matter emissions from boilers Big Bill **(ID No. G11037)**, Peter G **(ID No. G11038)**, and Riley Coal (**ID No. G11039**) shall be limited to no more than 0.15 pounds per million Btu, each;
   iii. nitrogen oxide emissions from boilers Big Bill, Peter G, Riley Coal, and No. 4 Power Boiler **(ID Nos. G11037, G11038, G11039, and G11040)** shall be limited to 4,368 tons per 12-month rolling total; and
   iv. carbon monoxide emissions from boiler Big Bill, Peter G, Riley Coal, and No. 4 Power Boiler **(ID Nos. G11037, G11038, G11039, and G11040)** shall be limited to 898.2 tons per 12-month rolling total.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if any of these emissions limitations are exceeded.

Testing [15A NCAC 02D2Q .0508(f)]

d. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of the testing are above the limits given in Section 2.2 A.1.c, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

e. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the particulate matter emission limits above by utilizing the test results of the particulate matter testing required per Section 2.1 T.1 and U.1. If the results of the testing are above the particulate matter limits given in Section 2.2 A.1.c, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

Monitoring, Recordkeeping, and Reporting [15A NCAC 02Q .0508(f)]

e. For compliance purposes, the following shall be monitored and recorded (in written or electronic format):
   i. the monthly usage of all fuels burned at the facility, categorized by source, for the previous fourteen months. The usage must be calculated for each of the three twelve month periods over the previous fourteen months;
   ii. the total monthly nitrogen oxide, and carbon monoxide emissions from Big Bill, Peter G, Riley Coal, and No. 4 Power Boiler **(ID Nos. G11037, G11038, G11039, and G11040)** for the previous fourteen months. The emissions shall be provided for each of the three twelve month periods over the previous fourteen months; and
   iii. The Permittee shall keep each monthly record on file for a minimum of three years.
   iv. The Permittee shall follow the monitoring and recordkeeping per Section 2.1 T.1.c and Section 2.1 U.2.c through U.2.g.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these requirements are not monitored or if the records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

f. The Permittee shall submit a summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities within 30 days after each calendar year quarter, postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September.

2. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for
15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. In order to avoid applicability of 15A NCAC 02D .0530 for major sources and major modifications, boilers Big Bill, Peter G, Riley Coal, and No. 4 Power Boiler **(ID Nos. G11037, G11038, G11039, and G11040)** shall discharge into the atmosphere less than 8,277 tons of sulfur dioxide per consecutive 12-months.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the result of the testing is above the limit given in Section 2.2 A.2.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

Monitoring, Recordkeeping, and Reporting [15A NCAC 02Q .0508(f)]

c. For compliance purposes, the following shall be monitored and recorded (in written or electronic format):
   i. the monthly usage of all fuels burned at the facility, categorized by source, for the previous fourteen months. The usage must be calculated for each of the three twelve month periods over the previous fourteen months;
   ii. the total monthly sulfur dioxide emissions from Big Bill, Peter G, Riley Coal, and No. 4 Power Boiler **(ID Nos. G11037, G11038, G11039, and G11040)** for the previous fourteen months. The sulfur dioxide data shall utilize fuel sulfur sampling results for coal and fuel oil. The emissions shall be provided for each of the three twelve month periods over the previous fourteen months; and
   iii. The Permittee shall keep each monthly record on file for a minimum of three years.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these requirements are not monitored or if the records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

d. The Permittee shall submit a summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities within 30 days after each calendar year quarter, postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September.

3. 15A NCAC 02D. 0530(u): USE OF PROJECTED ACTUAL EMISSIONS TO AVOID APPLICABILITY OF PREVENTION OF SIGNIFICANT DETERIORATION REQUIREMENTS

Use of Projected Actual Emissions [15A NCAC 02D .0530(u)]

a. Pursuant to 15A NCAC 02D .0530(u), the applicant relied on the use of projected actual emissions to demonstrate that the burning of natural gas in the Nos. 4 and 5 Lime Kilns and the Nos. 10 and 11 Recovery Furnaces **(ID Nos. G09028, G09029, G08020, and G08021)** and the associated new burners, as requested in permit application 4400159.10A, would not result in a significant emissions increase. In order to verify the assumptions used in the projected actual emissions calculations, the Permittee shall comply with the testing, recordkeeping and reporting requirements in Section 2.2 A.3.b through A.3.d, below.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ.

Recordkeeping [15A NCAC 02D .0530(u)]

c. The Permittee shall calculate and maintain records of actual emissions of carbon monoxide and volatile organic compounds from the Nos. 4 and 5 Lime Kilns and the Nos. 10 and 11 Recovery Furnaces **(ID Nos. G09028, G09029, G08020, and G08021)** in tons per year on a calendar year basis for each of the five years following the resumption of regular operations upon commencement of the modifications described in application 4400159.10A.

Reporting [15A NCAC 02D .0530(u)]

d. The Permittee shall submit a report for carbon monoxide and volatile organic compound emissions to the Director within 60 days after the end of each calendar year during which the records in Section 2.2 A.3.c, above, must be generated. The report shall contain the following items [CFR 51.166(r)(6)(v)(a) through (c)]:
   i. The name, address and telephone number of the major stationary source;
   ii. The annual emissions as calculated pursuant to Section 2.2 A.3.c, above; and
   iii. Any other information that the owner or operator wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).

4. 15A NCAC 02D .0530(u): USE OF PROJECTED ACTUAL EMISSIONS TO AVOID APPLICABILITY OF REQUIREMENTS OF PSD

a. The Permittee has used projected actual emissions to avoid applicability of prevention of significant deterioration requirements pursuant to application 4400159.16A for the Repowering Project Modification consisting of the addition of the Nos. 1 and 2 Package Boilers **(ID Nos. G11050 and G11051)**, a wet scrubber **(ID No. 11-CD-005-02)** on the Riley Coal Boiler **(ID No. G11039)** and a wet scrubber **(ID No. 11-CD-006-03)** on the No. 4 Power Boiler **(ID No. G11040)**. In order to verify the assumptions used in the projected actual emissions calculations, the Permittee shall comply with the requirements in Section 2.2 A.4.b, below.

Monitoring/Recordkeeping/Reporting [15A NCAC 02D .0530(u) and 2Q .0308]

b. The Permittee shall perform the following:
   i. Upon commencement of regular operation of the Nos. 1 and 2 Package Boilers **(ID Nos. G11050 and G11051)**, the Permittee shall maintain records of annual SO_2, PM, PM_{10}, $PM_{2.5}$, NO_X, CO, H_2SO_4, Fluorides, TRS, Lead, and VOC emissions from the Big Bill Boiler **(ID No. G11037)**, Peter G. Boiler **(ID No. G11038)**, Riley Coal Boiler **(ID No. G11039)**, No. 4 Power Boiler **(ID No. G11040)**, and the Nos. 1 and 2 Package Boilers **(ID Nos. G11050 and G11051)** in tons per year, on a calendar year basis related to the Repowering Project. The Permittee shall calculate these annual emissions for five years following startup of regular operations of the Nos. 1 and 2 Package Boilers.
   ii. The Permittee shall submit a report to the director within 60 days after the end of each calendar year during which these records must be generated. The report shall contain the items listed in 40 CFR 51.166(r)(6)(v)(a) through (c).
   iii. The Permittee shall make the information documented and maintained under this condition available to the Director or the general public pursuant to the requirements in 40 CFR 70.4(b)(3)(viii).
   iv. The Permittee shall provide a comparison of the reported actual emissions (post-construction emissions) for each of the five calendar years to the projected actual emissions (pre-construction projection) as included below:

Pollutant	Projected Actual Emissions* (tons per year)
SO_2	6076
PM (filterable only)	270
PM_{10}	314
$PM_{2.5}$	203
NO_X	2621
CO	751
H_2SO_4	71.8
F	27.1
TRS	9.9
Pb	0.64
VOC	42.6

* These projections are not enforceable limitations. If projected emissions are exceeded, consistent with 15A NCAC 02D .0530, the Permittee shall include, in its annual report, an explanation as to why the actual rates exceeded the projection.

B. Permit Application Submittal Requirement

1. 15A NCAC 02Q .0504: OPTION FOR OBTAINING CONSTRUCTION AND OPERATION PERMIT

Permitting [15A NCAC 02Q .0504(d)]

a. As required under 15A NCAC 02Q .0501(c)(2), the Permittee shall have one year from the date of beginning operation of the Nos. 1 and 2 Package Boilers **(ID Nos. G11050 and G11051)** the scrubbers **(ID Nos. 11-CD-005-02 and 11-CD-006-03)** installed on the Riley Coal Boiler and the No. 4 Power Boiler **(ID Nos. G11039 and G11040)**, whichever is earlier, to file an amended application following the procedures of Section 15A NCAC 02Q .0504.

Reporting [15A NCAC 02Q .0508(f)]

b. The Permittee shall notify the Regional Office, in writing, of the date of beginning operation of the Nos. 1 and 2 Package Boilers **(ID Nos. G11050 and G11051)** and the scrubbers **(ID Nos. 11-CD-005-02 and 11-CD-006-03)** installed on the Riley Coal Boiler and the No. 4 Power Boiler **(ID Nos. G11039 and G11040)** postmarked no later than 30 days after such date.

C. 40 CFR 63, Subpart S Affected Sources:

Source ID No.	Source Description	Control ID No	Control Description
Bleaching System Sources			
G05012	**No. 1 Hardwood Fiberline Bleaching System:**	05-CD-002-01	No.1 Fiberline Bleaching countercurrent packed tower-type wet scrubber (190 gallons per minute white liquor design flow rate)
	D1 Stage (ClO_2) Tower (No. 05-PU-003)		
	D1 Stage (ClO_2) Washer (No. 05-PU-004)		
	D1 Stage (ClO_2) Filtrate Tank (No. 05-TK-003)		
	D2 Stage (ClO_2) Tower (No. 05-PU-010)		
	D2 (ClO_2) Stage Washer (No. 05-PU-012)		
	D2 Stage (ClO_2) Filtrate Tank (No. 05-TK-011)		
G05013	**No. 2 Pine Fiberline Bleaching System:**	05-CD-017-01	No.2 Pine Fiberline Bleaching countercurrent packed tower-type wet scrubber (70 gallons per minute white liquor design flow rate)
	D1 Stage (ClO_2) Tower (No. 05-PU-017)		
	D1 Stage (ClO_2) Washer (No. 05-PU-022)*		
	D1 Stage (ClO_2) Filtrate Tank (No. 05-TK-018)		
	D2 Stage (ClO_2) Tower (No. 05-PU-021)		
	D2 Stage (ClO_2) Washer (No. 05-PU-024)*		
	D2 Stage (ClO_2) Filtrate Tank (No. 05-TK-027)		
LVHC System Sources			
G02004	**Digester Area:**	G09028 or G09029	No. 4 Lime Kiln (primary) (via NCG closed collection system) or No. 5 Lime Kiln (backup) (via NCG closed collection system)
	Eighteen (18) batch digesters (No. 02-PU-001)		
	No. 1 Hardwood Blow Heat System Blow Tank (No. 02-PU-005)		
	No. 1 Hardwood Blow Heat System Fiberline Accumulator (No. 02-PU-006)		
	No. 1 Hardwood Blow Heat System Secondary Condenser (No. 02-PU-008)		
	No. 2 Pine Blow Heat System Blow Tank (No. 02-PU-003)		
	No. 2 Pine Blow Heat System Fiberline Accumulator (No. 02-PU-007)		
	No. 2 Pine Blow Heat System Secondary Condenser (No. 02-PU-009)		
G07016	**Black Liquor Evaporator Systems:**	G09029 or G09028	No. 4 Lime Kiln (primary) (via NCG closed collection system) or No. 5 Lime Kiln (backup) (via NCG closed collection system)
	Swenson Countercurrent Evaporator (No. 07-PU-002)		
	Swenson Evaporator Hotwell (No. 07-TK-006)		
	West GB Countercurrent Evaporator (No. 07-PU-003)		
	West GB Evaporator Hotwell (No. 07-TK-007)		

Source ID No.	Source Description	Control ID No	Control Description
G07018	**Foul Condensate System:**	G09029	No. 5 Lime Kiln (primary) (via NCG closed collection system)
	Condensate Stripper (No. 07-PU-015)		
	Stripper Feed Tank (No. 07-TK-011)	or	or
	Reflux Tank (No. 07-TK-014)		
		G09028	No. 4 Lime Kiln (backup) (via NCG closed collection system)
G20060	**No. 1 Hardwood Turpentine Recovery System:**	G09029	No. 4 Lime Kiln (primary) (via NCG closed collection system)
	Turpentine Entrainment System (No. 20-PU-001)	or	or
	Turpentine Condenser (No. 20-PU-002)		
	Turpentine Decanter (No. 20-TK-003)	G09028	No. 5 Lime Kiln (backup) (via NCG closed collection system)
	Turpentine Underflow Tank (No. 20-TK-004)		
	Turpentine Transfer Tank (No. 20-TK-005)		
G20061	**No. 2 Pine Turpentine Recovery System:**	G09029	No. 4 Lime Kiln (primary) (via NCG closed collection system)
	Turpentine Entrainment System (No. 20-PU-006)	or	or
	Turpentine Condenser (No. 20-PU-007)	G09028	
	Turpentine Decanter (No. 20-TK-008)		No. 5 Lime Kiln (backup) (via NCG closed collection system)
	Turpentine Underflow Tank (No. 20-TK-009)		
	Turpentine Transfer Tank (No. 20-TK-010)		
HVLC System Sources			
G03005	**No. 1 Hardwood Fiberline Brownstock Washing System:**	NA	NA
	Nos. 1 through 4 Brownstock Washers (No. 03-PU-001)		
	Foam Tank No. 1 (No. 03-TK-003)		
	Foam Tank No. 2 (No. 03-TK-004)		
G03006	**No. 2 Pine Fiberline Brownstock Washing System:**	NA	NA
	Washers and Filtrate Tanks (No. 03-PU-032)*		
	Brownstock Washer Mix Tanks (Nos. 03-TK-015, 03-TK-016, 03-TK-017)		
G04009	**No. 1 Hardwood Fiberline Oxygen Delignification System:**	NA	NA
	O_2 Reactor (No. 04-PU-001)*		
	O_2 Blow Tank (No. 04-TK-005)		
	Post-O_2 Washer (No. 04-PU-002)		
	Post-O2 Filtrate Chest (No. 04-TK-008)		
G04010	**No. 2 Pine Fiberline Oxygen Delignification System:**	NA	NA
	O_2 Reactor (No. 04-PU-014)*		
	O_2 Blow Tank (No. 04-TK-018)		

Source ID No.	Source Description	Control ID No	Control Description
	Post-O_2 Washer (No. 04-PU-016)		
G24087	**No. 1 Hardwood Fiberline Deckers:**	NA	NA
	East Decker (No. 04-PU-009)		
	West Decker (No. 04-PU-004)		
	Decker Filtrate Tank (No. 04-TK-007)		
G24088	**No. 2 Pine Fiberline Deckers:**	NA	NA
	Decker (No. 04-PU-015)		
	Decker Filtrate Tank (No. 04-TK-017)		
G04025	No. 1 Hardwood Fiberline Pulp Screening System (No. 04-TK-008)	NA	NA
G04026	No. 2 Pine Fiberline Pulp Screening System	NA	NA
	HVLC Foul Gas Collection System Cooler		

* Sources are fully enclosed and do not have emission points.

The following table provides a summary of limits and standards for the emission source(s) describe above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	**Bleaching System** 10 ppmv total chlorinated HAP **LVHC System** Route system vents to No. 4 Lime Kiln or No. 5 Lime Kiln **HVLC System** The following sources are not subject to HVLC control requirements: • Knotter and screen systems with emissions less than 0.3 pounds per ton of oven dried pulp (See Section 2.2 C.1.d, below): • Decker systems that use any process water with a total HAP concentration less than or equal to 400 ppm by weight (see Section 2.2 C.1.d, below): No control is required for HAP emissions from brownstock washing and oxygen delignification systems under an alternate compliance approach using the equivalency by permit option authorized under 40 CFR §63.94. (See Section 2.2 C.2, below) **Pulping Condensate Collection** Collect a minimum 11.1 pounds HAP per ODTP followed by treatment in the Condensate Steam Stripper, meeting: 92 percent HAP removal, or 10.2 pounds HAP per ODTP removal	15 A NCAC 02D .1111 (40 CFR 63 Subpart S)

1. 15A NCAC 02D .1111: MACT 40 CFR PART 63, SUBPART S

a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR Part 63, Subpart S, including Subpart A "General Provisions."

Emission Limitations [15A NCAC 02D .1111]

Standards for the Bleaching Systems

b. The Permittee shall meet the following control requirements for bleaching systems using chlorinated compounds [40 CFR 63.445]:
   i. The equipment at each bleaching stage of the bleaching systems **(ID Nos. G05012 and G05013)**, where chlorinated compounds are introduced shall be enclosed and vented into a closed-vent system meeting the requirements specified Section 2.2 C.1.g, below, and introduced into the respective bleach plant scrubbers **(ID Nos. 05-CD-002-01 and 05-CD-017-01)**;
   ii. The bleach plant scrubbers **(ID Nos. 05-CD-002-01 and 05-CD-017-01)** shall achieve a treatment device outlet concentration of 10 ppmv or less of total chlorinated HAP; and
   iii. The Permittee shall not use hypochlorite or chlorine for bleaching in the bleaching systems **(ID Nos. G05012 and G05013)**. [40 CFR 63.445(d)(2)]
   iv. Until September 11, 2020, the Permittee shall comply with the work practice standards specified in Section 2.2 G.4, below, during startup, shutdown, and malfunction events.

Standards for the LVHC and HVLC pulping systems at Kraft processes

c. The Permittee shall meet the following control requirements for the total HAP emissions from the LVHC System **(ID Nos. G02004, G07016, G07018, G20060, and G20061)** [40 CFR 63.443]:
   i. Each LVHC system component shall be enclosed and vented into a closed-vent system meeting the requirements of Section 2.2 C.1.g, below; and
   ii. Emissions from each LVHC system **(ID Nos. G02004, G07016, G07018, G20060, and G20061)** shall be routed to either the No. 4 (primary) or No. 5 (backup) Lime Kilns **(ID Nos. G09028 or G09029)** by introducing the HAP emission stream with the primary fuel or into the flame zone. [40 CFR 63.442(d)(4)(i)]
   iii. Periods of excess emissions for the LVHC System **(ID Nos. G02004, G07016, G07018, G20060, and G20061)** reported under Section 2.2 C.1.v, below, shall not be a violation of these control requirements for total HAP emissions from LVHC systems (including periods of startup, shutdown, and malfunction), provided that the time of excess emissions divided by the total process operating time in a semi-annual reporting period does not exceed one percent. [40 CFR 63.443(e)]

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if HAP emissions from the LVHC system are not controlled as required above.

d. The Permittee shall meet the following control requirements for the HAP emissions from the HVLC system sources **(ID Nos. G03005, G03006, G04009, G04010, G04025, and G04026):** [40 CFR 63.443]
   i. The Permittee shall meet the HVLC control requirements for the No. 1 Hardwood Fiberline Brownstock Washing System **(ID No. G03005)**, the No. 2 Pine Fiberline Brownstock Washing System **(ID No. G03006)**, the No. 1 Hardwood Fiberline Oxygen Delignification System **(ID No. G04009)**, and the No. 2 Pine Fiberline Oxygen Delignification System **(ID No. G04010)** by demonstrating compliance with Section 2.2 C.2, Equivalency by Permit. [40 CFR 63.94]
   ii. The Permittee shall control emissions from each knotter and screen system with total emissions of greater than or equal to 0.3 pounds of total HAP per ton of ODTP. Based on a June 2004 exemption analysis, the Permittee has demonstrated that the following sources are exempt from these HVLC control requirements: [40 CFR 63.443(a)(1)(ii)(C)]
      (A) The No. 1 Hardwood Fiberline Pulp Screening System **(ID No. G04025)**; and
      (B) The No. 2 Pine Fiberline Pulp Screening System **(ID No. G04026).**
   iii. The Permittee shall control emissions from each decker system that uses any process water with a total HAP concentration greater than 400 parts per million by weight. Based on a June 2004 exemption analysis, the Permittee has demonstrated that the following sources are exempt from these HVLC control requirements: [40 CFR 63.443(a)(1)(iv)(B)]
      (A) The No. 1 Hardwood Fiberline Decker Systems **(ID No. G24087)**; and
      (B) The No. 2 Pine Fiberline Decker System **(ID No. G24088).**

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if HAP emissions from the HVLC systems are not controlled as required above.

Standards for Kraft pulping process condensates

e. The Permittee shall collect pulping process condensates from a combination of one or more of the systems identified below that in total contain a total HAP mass of 11.1 pounds per ton of oven dried pulp: [40 CFR 63.446(b) and (c)(3)]

i. The Digester System **(ID No. G02004)**;
ii. The Turpentine Recovery Systems **(ID Nos. G20060 and G20061)**;
iii. The Evaporator Systems **(ID Nos. G07016)**;
iv. The HVLC collection system;
v. The LVHC collection system; and
vi. The Black Liquor Oxidization System **(ID No. G08022).**

f. The pulping process condensates identified in Section 2.2 C.1.e, above, shall be conveyed in a closed collection system that is designed and operated to meet the following requirements: [40 CFR 63.446(d), (e) and (g)]
   i. Each closed collection system shall meet the individual drain system requirements specified in 40 CFR 63.960, 63.961, and 63.962, except for closed-vent systems and control devices;
   ii. Closed-vent systems shall be designed and operated in accordance with Section 2.2 C.1.g, below;
   iii. The Stripper Feed Tank **(ID No. G07018.ES 07-TK-011)** shall meet the following requirements: [40 CFR 63.446(d)(2)]
      (A) The fixed roof and all openings (e.g., access hatches, sampling ports, gauge wells) shall be designed and operated with no detectable leaks as indicated by an instrument reading of less than 500 parts per million, measured as methanol, above background.
      (B) The Stripper Feed Tank **(ID No. G07018.ES 07-TK-011)** shall be vented into a closed-vent system that meets the requirements in Section 2.2 C.1.j, below, and routed to either the No. 5 (primary) or No. 4 (backup) Lime Kilns **(ID Nos. G09029 or G09028)** by introducing the HAP emission stream with the primary fuel or into the flame zone [40 CFR 63.443(d)(4)(i)]; and
      (C) Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that the tank contains pulping process condensates or any HAP removed from a pulping process condensate stream except when it is necessary to use the opening for sampling, removal, or for equipment inspection, maintenance, or repair.
   iv. The collected pulping process condensates identified in Section 2.2 C.1.f, above, shall be treated by the Condensate Stripper **(ID No. G07018.ES 07-PU-015)** which shall: [40 CFR 63.446(e)(2) or (e)(5)]
      (A) Reduce or destroy the total HAPs by at least 92 percent or more by weight; or
      (B) Remove a minimum of 10.2 pounds HAP per ton of oven dried pulp (ODTP).
      (C) Each HAP removed shall be vented into a closed-vent system that meets the requirements in Section 2.2 C.1.g, below, and routed to either the No. 5 (primary) or No. 4 (backup) Lime Kiln **(ID Nos. G09029 or G09028)** by introducing the HAP emission stream with the primary fuel or into the flame zone [40 CFR 63.446(f)]
   v. For the Foul Condensate Stripper System **(ID No. G07018)** used to comply with these requirements specified above, periods of excess emissions reported shall not be a violation of Section 2.2 C.1.e provided that the time of excess emissions (including period of startup, shutdown, and malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed 10 percent.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the pulping process condensates are not collected and controlled as required above.

Standards for Enclosures and Closed-Vent Systems

g. The Permittee shall meet the following standards for enclosures and closed-vent systems for capturing and transporting vent streams that contain hazardous air pollutants. [40 CFR 63.450]
   i. Each enclosure or hood opening closed during the initial performance test shall be maintained in the same closed and sealed position as during the performance test at all times except when necessary to use the opening for sampling, inspection, maintenance, or repairs.
   ii. For each enclosure, the Permittee shall maintain negative pressure at each enclosure or hood opening as demonstrated by the procedures specified below: [40 CFR 63.457(e)]
      (A) An anemometer to demonstrate flow into the enclosure opening;
      (B) Measure the static pressure across the opening;
      (C) Smoke tubes to demonstrate flow into the enclosure opening; or
      (D) Any other industrial ventilation test method demonstrated to the satisfaction of DAQ.
   iii. Each component of the closed-vent system that is operated at positive pressure and located prior to a control device shall be designed for and operated with no detectable leaks as measured by the procedures specified below: [40 CFR 63.457(d)]
      (A) A leak is indicated by an instrument reading of 500 parts per million by volume or greater, measured as methanol, above background,
      (B) The Permittee shall comply with Method 21, of 40 CFR Part 60, Appendix A-7;

(C) The instrument specified in Method 21 shall be calibrated before use according to the procedures specified in Method 21 on each day that leak checks are performed. The following calibration gases shall be used:
(1) Zero air (less than 10 parts per million by volume of hydrocarbon in air); and
(2) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 parts per million by volume methane or n-hexane.

iv. For each bypass line in the closed-vent system that could divert vent streams containing HAP to the atmosphere without meeting the emission limitations Section 2.2 C.1.b through C.1.d, above, shall comply with either of the following requirements [40 CFR 63.450(d)]:
(A) On each bypass line, the Permittee shall install, calibrate, maintain, and operate according to the manufacturer's specifications a flow indicator that is capable of taking periodic readings at least once every 15 minutes. The flow indicator shall be installed in the bypass line in such a way as to indicate flow in the bypass line; or
(B) For bypass line valves that are not computer controlled, the Permittee shall maintain the bypass line valve in the closed position with a car seal or a seal placed on the valve or closure mechanism in such a way that valve or closure mechanism cannot be opened without breaking the seal.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the enclosures and closed-vent system standards are not met as specified above.

Testing [15A NCAC 02Q .0508(f)]

h. If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limits given in Section 2.2 C.1.b through C.1.f, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

i. The Permittee shall conduct repeat periodic performance tests at five-year intervals for emission sources specified in Section 2.2 C.1.b and C.1.c, above, except for emission sources controlled by the Nos. 4 or 5 Lime Kilns **(ID Nos. G09028 or G09029)**. [40 CFR 63.457(a)]
i. The first of the five-year tests shall be conducted by September 7, 2015, and thereafter within 60 months from the date of the previous performance test. Performance testing shall be conducted according to 40 CFR 63.457.
ii. The Permittee may seek to establish or reestablish the monitoring parameter values specified in Section 2.2 C.1.j, C.1.k, C.1.m, and C.1.n, below. The Permittee shall establish or reestablish the value for each operating parameter during initial or subsequent periodic performance tests, using the following procedures:
(A) During the initial or any subsequent performance test, the Permittee shall continuously record the operating parameter;
(B) Determinations shall be based on the control performance and parameter data monitored during the performance test, supplemented if necessary by engineering assessments and the manufacturer's recommendations;
(C) The Permittee shall provide, for the DAQ approval, the rationale for the selected operating parameter value, and monitoring frequency, and averaging time. Include all data and calculations used to develop the value and a description of why the value, monitoring frequency, and averaging time demonstrate continuous compliance with the applicable emission standard.
iii. If the Permittee reevaluates compliance with the emission limits in Section 2.2 C.1.b or C.1.e, above, at parameter ranges outside of those listed below, the Permittee shall, upon approval by the DAQ, attach the approval memo containing the revised operating parameters to this permit and maintain the parameters in the associated operating ranges contained therein.
iv. The established continuous compliance monitoring parameters shall not apply during any required subsequent testing.

Monitoring for the Bleaching System Scrubbers [15A NCAC 02Q .0508(f)]

j. The Permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS), on the No. 1 Bleach Plant Wet Scrubber **(ID No. 05-CD-002-01)**. The CMS shall include a continuous recorder. The CMS shall be operated to ensure the following operational parameters are maintained [40 CFR 63.453(c) and (o)]:
i. The minimum pH of the scrubber's effluent shall be 9.23 (averaged over three hours);
ii. The scrubber's inlet vent gas fan operating status of “on” (on or off based on motor load); and
iii. The minimum scrubber liquid recirculation rate for the respective scrubber shall be 85.8 gallons per minute (3-hour average).

iv. Operation of the No. 1 Bleach Plant Wet Scrubber **(ID No. 05-CD-002-01)** below the minimum operating parameters listed above shall constitute a violation of the emission standard of Section 2.2 C.1.b, above, and shall be reported as a period of excess emissions in accordance with Section 2.2 C.1.v, below.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if any monitoring parameter values are exceeded, except as provided in Section 2.2 C.1.i, above, or if the monitoring procedures are not followed.

k. The Permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS), on the No. 2 Bleach Plant Wet Scrubber **(ID No. 05-CD-017-01)**. The CMS shall include a continuous recorder. The CMS shall be operated to ensure the following operational parameters are maintained [40 CFR 63.453(c) and (o)]:
   i. The minimum pH of each scrubber's effluent shall be 8.38 (averaged over three hours);
   ii. The scrubber's inlet vent gas fan operating status of "on" (on or off based on motor load); and
   iii. The minimum scrubber liquid recirculation rate for the respective scrubber shall be 27.57 gallons per minute (3-hour average).
   iv. Operation of the No. 2 Bleach Plant Wet Scrubber **(ID No. 05-CD-017-01)** below the minimum operating parameters listed above shall constitute a violation of the emission standard of Section 2.2 C.1.b, above, and shall be reported as a period of excess emissions in accordance with Section 2.2 C.1.v, below.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if any monitoring parameter values are exceeded, except as provided in Section 2.2 C.1.i, above, or if the monitoring procedures are not followed.

Monitoring for the LVHC Pulping Systems Control Devices [15A NCAC 02D .1111]

l. No control device parameter monitoring is required for pulping vent systems routed to the No. 4 Lime Kiln **(ID No. G09028)** or the No. 5 Lime Kiln **(ID No. G09029)**. [40 CFR 60, Subpart 63.453]

Monitoring for the Pulping Process Condensate Collection: [15A NCAC 02D .1111]

m. The Permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS) to monitor condensate collection. The CMS shall include a continuous recorder. The CMS shall be operated to ensure the following operational parameters are maintained on a 15-day rolling average of stripper operating days. [40 CFR 63.446 and 63.453(g) and (o)]:
   i. Foul condensates collected in the Stripper Feed Tank shall be equal to or greater than 379 gallons per minute; and
   ii. Foul condensates from the Black Liquor Oxidizer **(ID No. G08022)** gas collection system shall be collected and sent to the Stripper Feed Tank.
   iii. Condensates collected below the minimum operating parameters listed above shall constitute a violation of the emission standard of Section 2.2 C.1.e, above, and shall be reported as a period of excess emissions in accordance with Section 2.2 C.1.v, below.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if any monitoring parameter values are exceeded, except as provided in Section 2.2 C.1.i, above, or if the monitoring procedures are not followed.

Monitoring for the Pulping Process Condensates Steam Stripper [15A NCAC 02D .1111]**:**

n. The Permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS) on the Condensate Stripper **(ID No. ES 07-PU-015)**. The CMS shall include a continuous recorder. The CMS shall be operated to ensure the following operational parameters are maintained on a 15-day rolling average of stripper operating days. [40 CFR 63.453(g) and (o)]:
   i. Foul condensates feed from the Stripper Feed Tank shall be equal to or greater than 379 gallons per minute;
   ii. The temperature of the foul condensates feed shall be equal to or greater than 161^{O}F; and
   iii. Steam feed to the Foul Condensate Stripper shall be equal to or greater than 38,021 lb/hour.
   iv. Operation of the Condensate Stripper **(ID No. ES 07-PU-015)** below the minimum operating parameters listed above shall constitute a violation of the emission standard of Section 2.2 C.1.e, above, and shall be reported as a period of excess emissions in accordance with Section 2.2 C.1.v, below.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if any monitoring parameter values are exceeded, except as provided in Section 2.2 C.1.i, above, or if the monitoring procedures are not followed.

Monitoring/Inspections for Enclosures, Closed-Vent, and Closed Collection Systems [15A NCAC 02D .1111]

o. Each enclosure and closed-vent system shall meet the following monitoring requirements: [40 CFR 63.453(k)].
   i. The Permittee shall conduct a visual inspection of the closure mechanism of each enclosure specified in Section 2.2 C.1.g, above, shall be performed at least once every 30 days to ensure the opening is maintained in

the closed position and sealed. The Permittee shall demonstrate initially and annually that each enclosure opening is maintained at negative pressure as specified in Section 2.2 C.1.g, above.

ii. The Permittee shall visually inspect each closed-vent system every 30 days and at other times as requested by the DAQ. The visual inspection shall include inspection of ductwork, piping, enclosures, and connections to covers for visible evidence of defects.

iii. For positive pressure closed-vent systems or portions of closed-vent systems, the Permittee shall demonstrate no detectable leaks as specified in Section 2.2 C.1.g, above, measured initially and annually by the procedures in Section 2.2 C.1.g.

iv. The Permittee shall inspect the valve or closure mechanism specified in Section 2.2 C.1.g.iii.(B), above, at least once every 30 days to ensure that the valve is maintained in the closed position and the emission point gas stream is not diverted through the bypass line.

v. If a required inspection identifies visible defects in ductwork, piping, enclosures or connections to covers required, or if an instrument reading of 500 parts per million by volume or greater above background is measured (as methanol), or if enclosure openings are not maintained at negative pressure, then the Permittee shall take following corrective actions as soon as practicable.

(A) A first effort to repair or correct the closed-vent system shall be made as soon as practicable but no later than 5 calendar days after the problem is identified.

(B) The repair or corrective action shall be completed no later than 15 calendar days after the problem is identified. Delay of repair or corrective action is allowed if the repair or corrective action is technically infeasible without a process unit shutdown or if the Permittee determines that the emissions resulting from immediate repair would be greater than the emissions likely to result from delay of repair. Repair of such equipment shall be completed by the end of the next process unit shutdown.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the monitoring is not performed.

p. For each pulping process condensate closed collection system used to comply with Section 2.2 C.1.e and C.1.f shall comply with the requirements specified below [40 CFR 63.453(l)]

i. The Permittee shall visually inspect each pulping process condensate closed collection system every 30 days and shall comply with the inspection and monitoring requirements specified in 40 CFR Part 63, Subpart RR, Section 63.964, except:

(A) The Permittee shall comply with the recordkeeping requirements Section 2.2 C.1 instead of the requirements specified in 40 CFR 63.964(a)(1)(vi) and (b)(3) (Subpart RR).

(B) The Permittee shall comply with the inspection and monitoring requirements for closed-vent systems and control devices specified in Section 2.2 C.1.o, above, instead of the requirements specified in 40 CFR 63.964(a)(2) (Subpart RR).

ii. Each condensate tank used in the closed collection system shall be operated with no detectable leaks as specified in Section 2.2 C.1.f.iv.(C), above, measured initially and annually by the procedures specified in Section 2.2 C.1.f.ii, above.

iii. If an inspection required by this section identifies visible defects in the closed collection system, or if an instrument reading of 500 parts per million or greater above background is measured, then the Permittee shall take the corrective actions specified in 40 CFR 63.964(b) (Subpart RR).

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the closed collection system is not inspected as required above.

q. The Permittee shall prepare and maintain a site-specific inspection plan, including a drawing or schematic of the components of affected equipment and shall record the following for each inspection for each enclosure opening, closed-vent system, and closed collection system [40 CFR 63.454(b)]:

i. Date of inspection;
ii. The equipment type and identification;
iii. Results of negative pressure tests for enclosures;
iv. Results of leak detection tests;
v. The nature of the defect or leak and the method of detection (i.e., visual inspection or instrument detection);
vi. The date the defect or leak was detected and the date of each attempt to repair the defect or leak;
vii. Repair methods applied in each attempt to repair the defect or leak;
viii. The reason for the delay if the defect or leak is not repaired within 15 days after discovery;
ix. The expected date of successful repair of the defect or leak if the repair is not completed within 15 days;
x. The date of successful repair of the defect or leak;

xi. The position and duration of opening of bypass line valves and the condition of any valve seals; and
xii. The duration of the use of bypass valves on computer controlled valves.
The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these inspection records are not maintained.

Startup, Shutdown, and Malfunction [15A NCAC 02D .1111]

r. Except as specified in Section 2.2 C.1.b.iv, above, the Permittee shall operate and maintain the Subpart S affected sources at all times, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the DAQ which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.453(q)] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these practices are not conducted.

s. In response to an action to enforce the standards set forth in Section 2.2 C.1.b, through C.1.g, above, the Permittee may assert an affirmative defense to a claim for civil penalties for violations of such standards that are caused by malfunction, as defined at 40 CFR 63.2. Appropriate penalties may be assessed, however, if the Permittee fails to meet the burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief. To establish the affirmative defense in any action to enforce such a standard, the Permittee must timely meet the reporting requirements in Section 2.2 C.1.w, below, and must prove by a preponderance of evidence that: [40 CFR 63.456]
   i. The violation:
      (A) Was caused by a sudden, infrequent, and unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner, and
      (B) Could not have been prevented through careful planning, proper design or better operation and maintenance practices; and
      (C) Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and
      (D) Was not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and
   ii. Repairs were made as expeditiously as possible when a violation occurred. Off-shift and overtime labor were used, to the extent practicable to make these repairs; and
   iii. The frequency, amount and duration of the violation (including any bypass) were minimized to the maximum extent practicable; and
   iv. If the violation resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and
   v. All possible steps were taken to minimize the impact of the violation on ambient air quality, the environment and human health; and
   vi. All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and
   vii. All of the actions in response to the violation were documented by properly signed, contemporaneous operating logs; and
   viii. At all times, the affected source was operated in a manner consistent with good practices for minimizing emissions; and
   ix. A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the violation resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of any emissions that were the result of the malfunction.

Recordkeeping [15A NCAC 02D .1111]

t. The results of the CMS monitoring, enclosure system monitoring, and closed-vent system monitoring shall be maintained (in written or electronic format) per the requirements of 40 CFR 63.454(a). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these records are not maintained.

u. The Permittee shall maintain the following records of malfunctions [40 CFR 63.454(g)]:
   i. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.
   ii. Records of actions taken during periods of malfunction to minimize emissions in accordance with Section 2.2 C.1.r, above, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

Reporting [15A NCAC 02D .1111]

v. The Permittee shall submit a summary report of excess emissions postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. When no exceedances of an operating parameter have occurred, such information shall be included in the report. [40 CFR 63.453(q)]

w. The Permittee shall comply with the reporting requirements of 40 CFR 63, Subpart A as specified in Table 1 of Part 63, Subpart S.

x. If a malfunction occurred during the reporting period, the summary report must include the number, duration and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with Section 2.2, C.1.r, above, including actions taken to correct a malfunction. [40 CFR 63.455(g)]

y. The Permittee shall submit performance test reports as specified in 40 CFR 63.455(h).

z. The Permittee seeking to assert an affirmative defense shall submit a written report to DAQ with all necessary supporting documentation, that it has met the requirements set forth in Section 2.2 C.1.s, above. This affirmative defense report shall be included in the summary report otherwise required after the initial occurrence of the violation of the relevant standard (which may be the end of any applicable averaging period). If the summary report is due less than 45 days after the initial occurrence of the violation, the affirmative defense report may be included in the second summary report due after the initial occurrence of the violation of the relevant standard.

2. 15A NCAC 02D .1111: MACT 40 CFR 63 SUBPART S via 40 CFR 63.94 Equivalency by Permit – HVLC System Sources

The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR Part 63, Subpart S, including Subpart A "General Provisions" as defined per 63.440(g) and indicated per Table 1 of Part 63, Subpart S. Terms used throughout this section are defined in the Clean Air Act as amended in 1990 and in 40 CFR 63.2 and 63.441. Units and abbreviations are defined in 40 CFR 63.3.

The authority for the alternate control requirements for Equivalency by Permit (EBP) is given in 40 CFR parts 63.91 63.94, and 63.99 as promulgated in "Approval of Section 112(l) Authority for Hazardous Air Pollutants; Equivalency by Permit Provisions; National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry; State of North Carolina", Federal Register, Vol. 69, No. 70/Monday, April 12, 2004 pp 19106-19109. Section 63.99 "Delegated Federal Authorities" of Subpart E "Approval of State Programs and Delegation of Federal Authorities" was also amended at FR Vol. 69, No. 70/Monday, April 12, 2004 p 19110 to add 63.99(a)(33)(ii) North Carolina.

Standards for the affected HVLC pulping system processes [15A NCAC 02Q .0508(f) and 02D .1111]

a. No later than April 16, 2007, the Permittee shall control HAP emissions from the Black Liquor Oxidation (BLOX) System **(ID No. G08022)** sources as required below, in lieu of controlling the 40 CFR 63, Subpart S-affected HAP emissions from: [40 CFR Part 63.443 and 63.94]

The Brownstock Washing System **(ID Nos. G03005 and G03006)** Sources:

No. 1 Hardwood Fiberline Nos 1. Through 4 Brownstock Washers (No. 03-PU-001);
No. 1 Hardwood Fiberline Foam Tank No.1 (No. ES-03-TK-003);
No. 1 Hardwood Fiberline Foam Tank No. 2 (No. ES-03-TK-004);
*No. 2 Pine Fiberline Washers and Filtrate Tanks (No. 03-PU-032)**
No. 2 Pine Fiberline Brownstock Washer Mix Tanks (Nos. 03-TK-015, 03-TK-016, and 03-TK-017)

The Oxygen Delignification Systems **(ID Nos. G04009 and G04010)** Sources:

*No. 1 Hardwood Fiberline O_2 Reactor (No. 04-PU-001)**
No. 1 Hardwood Fiberline O_2 Blow Tank (No. 04-TK-005);
No. 1 Hardwood Fiberline Post O_2 Washer (No. 04-PU-002);
No. 1 Hardwood Fiberline Post O_2 Filtrate Chest (No. 04-TK-008);
*No. 2 Pine Fiberline O_2 Reactor (No. 04-PU-014)**
No. 2 Pine Fiberline O_2 Blow Tank (No. 04-TK-018); and
No. 2 Pine Fiberline Post O_2 Washer (No. 04-PU-016).

* These sources are fully enclosed and do not have a vent to the atmosphere.

Standards for the BLOX system [15A NCAC 02Q .0508(f) and 02D .1111]

b. No later than April 16, 2007, the Permittee shall meet the control requirements for the total HAP emissions from the BLOX System **(ID No. G08022)** sources. Each BLOX system component shall be enclosed and vented into a closed-vent system meeting the requirements of Section 2.2 C.1.g, above, and controlled per the following requirements: [40 CFR 63.94 and 63.443]:
   i. Reduce total HAP emissions by 98 percent or more by weight; or
   ii. Reduce total HAP emissions using a thermal oxidizer designed and operated at a minimum temperature of 871°C (1600°F) and a minimum residence time of 0.75 seconds.

c. Periods of excess emissions reported under Section 2.2 C.2.o, below, shall not be a violation of the above requirements provided that the time of excess emissions (including periods of startup, shutdown, and malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed four percent for control devices used to reduce the total HAP emissions from the BLOX system. The Permittee shall be deemed in non-compliance with 15A NCAC 02D .1111 when excess emissions exceed four percent.

d. The Black Liquor Oxidation (BLOX) System thermal oxidizer is permitted to burn only BLOX gases and natural gas as an auxiliary fuel.

Testing [15A NCAC 02Q .0508(f) and 02D .1111]

e. If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this or any testing are above the limits contained herein, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 via 40 CFR 63.94. [40 CFR 63.94, 40 CFR 63.457]
   i. An initial performance test is not required to show compliance with the HAP destruction efficiency if the Permittee selects the compliance method per paragraph 2.2 C.2.b.ii, above. Otherwise, an initial performance test shall be conducted no later than April 16, 2007 and subsequent performance tests shall be conducted within 60 months after the previous test. The performance tests shall be conducted in accordance with General Condition JJ and with the requirements of 40 CFR 63.457.
   ii. If emission testing is required for parity demonstration, the testing shall be done in accordance with General Condition JJ, and the test methods and procedures contained in 40 CFR 63.457. The testing will consist of:
   (A) determining the emissions from the sources that were subject to 40 CFR 63 Subpart S as identified in Section 2.2 C.2.a, above, but are not controlled under the EBP option; and
   (B) the uncontrolled emissions from the BLOX system.

   The Permittee shall be deemed in non-compliance with 15A NCAC 02D .1111 via 40 CFR 63.94 if the emissions from Section 2.2 C.2.e.ii.(A), above, exceed the emissions from Section 2.2 C.2.e.ii.(B), above.

Production Monitoring for Parity with 40 CFR 63, Subpart S [15A NCAC 02Q .0508(f) and 02D .1111]

f. To ensure continuing parity, the hardwood pulp production shall not exceed 83 percent of the total pulp production on a 12-month rolling average basis. The Permittee shall keep records of the monthly hardwood pulp production and the monthly total pulp production. The initial 12-month rolling average shall cover the period May 2007 through April 2008. [40 CFR 63.94] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 via 40 CFR 63.94 if the monitoring is not performed, or if the 12-month rolling average hardwood pulp production exceeds 83 percent of the total pulp production.

Monitoring for BLOX System Control Device [15A NCAC 02Q .0508(f) and 02D .1111]

g. The Permittee shall install, calibrate, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS) to measure the temperature in the thermal oxidizer firebox or in the ductwork immediately downstream of the firebox and before any substantial heat exchange occurs. The CMS shall

include a continuous recorder. If the Permittee reevaluates compliance with the emission limit in Section 2.2 C.2.b, above, at parameter ranges outside of those listed below, the Permittee shall, upon approval by the DAQ, attach the approval memo containing the revised operating parameters to this permit and maintain the parameters in the associated operating ranges contained therein. The CMS shall be operated to ensure the following operational parameters are maintained [40 CFR 63, Subpart 63.453(a), (b), (n), and (o) and 63.94]:

i. If the Permittee elects to comply with Section 2.2 C.2.b.i, above, a 3-hour rolling average minimum operating temperature of 1450°F shall be recorded and maintained.
ii. An alternate minimum operating temperature may be established per additional approved testing performed per Section 2.2 C.1.i.ii, above.
iii. If the Permittee elects to comply with Section 2.2 C.2.b.ii, above, then a minimum operating temperature of 871°C (1600°F) shall be recorded and maintained.

Operation of the black liquor oxidation system control device **(ID. No. CD-BLOXRTO)** below established minimum operating temperatures, or failure to perform the required monitoring shall be reported as a period of excess emissions. The established continuous compliance monitoring parameters shall not apply during any required subsequent testing.

Standards for Enclosures and Closed-Vent Systems [15A NCAC 02Q .0508(f) and 02D .1111]

h. The Black Liquor Oxidation System enclosure and closed-vent system shall meet the requirements of Section 2.2 C.1.g, above. [40 CFR 63.450, 40 CFR 63.94] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 via 40 CFR 63.94 if the enclosure and closed-vent system requirements are not met.

Monitoring for Enclosures and Closed-Vent Systems [15A NCAC 02Q .0508(f) and 02D .1111]

i. The Black Liquor Oxidation System enclosure and closed-vent system shall meet the monitoring requirements of Section 2.2 C.1.o, above. [40 CFR 63.453, 40 CFR 63.94] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 via 40 CFR 63.94 if the monitoring is not performed.

Startup, Shutdown, and Malfunction [15A NCAC 02Q .0508(f) and 02D .1111]

j. At all times, the Permittee shall operate and maintain the Black Liquor Oxidation System, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the DAQ which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.94 and 63.453(q)] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these practices are not conducted.

k. In response to an action to enforce the standards set forth in Section 2.2 C.2.b, above, the Permittee may assert an affirmative defense to a claim for civil penalties for violations of such standards that are caused by malfunction, as defined at 40 CFR 63.2. Appropriate penalties may be assessed, however, if the Permittee fails to meet the burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief. To establish the affirmative defense in any action to enforce such a standard, the Permittee must timely meet the reporting requirements in Section 2.2 C.2.s, below, and must prove by a preponderance of evidence that: [40 CFR 63.456]
    i. The violation:
        (A) Was caused by a sudden, infrequent, and unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner, and
        (B) Could not have been prevented through careful planning, proper design or better operation and maintenance practices; and
        (C) Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and
        (D) Was not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and
    ii. Repairs were made as expeditiously as possible when a violation occurred. Off-shift and overtime labor were used, to the extent practicable to make these repairs; and
    iii. The frequency, amount and duration of the violation (including any bypass) were minimized to the maximum extent practicable; and
    iv. If the violation resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and
    v. All possible steps were taken to minimize the impact of the violation on ambient air quality, the environment and human health; and

vi. All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and
vii. All of the actions in response to the violation were documented by properly signed, contemporaneous operating logs; and
viii. At all times, the affected source was operated in a manner consistent with good practices for minimizing emissions; and
ix. A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the violation resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of any emissions that were the result of the malfunction.

Recordkeeping/Reporting [15A NCAC 02Q .0508(f) and 02D .1111]

l. The results of the CMS monitoring, Enclosure System monitoring, and Closed-Vent System monitoring shall be maintained (in written or electronic format) per the requirements of 40 CFR 63.454 and 63.455. [40 CFR 63.94, 63.454, and 63.455] The Permittee shall be deemed in noncompliance with 15A NCAC .02D .1111 if these records are not maintained.

m. The results of the monthly hardwood and total pulp production monitoring required by Section 2.2 C.2.f shall be maintained in written or electronic format. [40 CFR 63.94, 63.454, and 63.455]

n. The Permittee shall maintain the following records of malfunctions [40 CFR 63.94 and 63.454(g)]:
i. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.
ii. Records of actions taken during periods of malfunction to minimize emissions in accordance with Section 2.2 C.2.j, above, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f) and 02D .1111]

o. The Permittee shall submit a summary report of excess emissions postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. When no exceedances of an operating parameter have occurred, such information shall be included in the report. This report shall also include the 12-month rolling average percent hardwood pulp production for each month in the reporting period, or the average percent hardwood pulp production since April 16, 2007 if 12 months of data are not yet available. [40 CFR 63.454; 63.455, 40 CFR 63.94]

p. The Permittee shall comply with the reporting requirements of 40 CFR 63, Subpart A as specified in Table 1 of 40 CFR 63.440.

q. If a malfunction occurred during the reporting period, the summary report must include the number, duration and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with Section 2.2 C.2.j, above, including actions taken to correct a malfunction. [40 CFR 63.455(g)]

r. The Permittee shall submit performance test reports as specified in 40 CFR 63.455(h).

s. The Permittee seeking to assert an affirmative defense shall submit a written report to DAQ with all necessary supporting documentation, that it has met the requirements set forth in Section 2.2 C.2.k, above. This affirmative defense report shall be included in the summary report otherwise required after the initial occurrence of the violation of the relevant standard (which may be the end of any applicable averaging period). If the summary report is due less than 45 days after the initial occurrence of the violation, the affirmative defense report may be included in the second summary report due after the initial occurrence of the violation of the relevant standard. [40 CFR 63.456(b)]

D. 40 CFR 63, Subpart MM Affected Sources:

Source ID No.	Source Description	Control ID No	Control Description
G08020	No. 10 Recovery Furnace	08-CD-001-01	Wet Bottom electrostatic precipitator
G08023	No. 10 Smelt Dissolving Tank	08-CD-011-01	Chevron Mist Eliminator
G08021	No. 11 Recovery Furnace	08-CD-002-01	Wet Bottom electrostatic precipitator
G08024	No. 11 Smelt Dissolving Tank	08-CD-012-01	Chevron Mist Eliminator
G09028	No. 4 Lime Kiln	08-CD-009-01	Flooded Disk-type wet scrubber
G09029	No. 5 Lime Kiln	09-CD-010-01	MicroMist venturi scrubber

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	**No. 4 Lime Kiln** PM emissions shall be no greater than 0.10 gr/dscf, corrected to 10% oxygen. **No. 5 Lime Kiln** PM emissions shall be no greater than 0.10 gr/dscf, corrected to 10% oxygen. **No. 10 Recovery Furnace** PM emissions shall be no greater than 0.032 gr/dscf, corrected to 8% oxygen. **No. 11 Recovery Furnace** PM emissions shall be no greater than 0.032 gr/dscf, corrected to 8% oxygen. **No. 10 Smelt Dissolving Tank** PM emissions shall be no greater than 0.268 gr/dscf. **No. 11 Smelt Dissolving Tank** PM emissions shall be no greater than 0.321 gr/dscf. **Overall Chemical Recovery System PM Limit** Total PM emissions from the Nos. 4 and 5 Lime Kilns, Nos. 10 and 11 Recovery Furnaces, and Nos. 10 and 11 Smelt Dissolving Tanks shall be no greater than 1.49 lb/TBLS.	15A NCAC 02D .1111 (40 CFR 63, Subpart MM)

1. 15A NCAC 02D .1111: MACT 40 CFR 63 SUBPART MM

a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR Part 63, Subpart MM, including Subpart A "General Provisions" as defined per 63.440(g) and indicated per Table 1 of Subpart MM. Terms used throughout this section are defined in the Clean Air Act as amended in 1990 and in 40 CFR 63.2 and 63.861. Units and abbreviations are defined in 40 CFR 63.3. [15A NCAC 02D .1111]

Emission Limitations [15A NCAC 02D .1111]

b. The Permittee shall comply with the following for the chemical recovery system:

i. The overall filterable particulate matter emissions from the chemical recovery system shall not exceed 1.49 lb/ton BLS and filterable particulate matter emissions from the individual chemical recovery sources shall not exceed the following limits: [63.865(a)(1)(ii)]
   (A) 0.10 gr/dscf, corrected to 10 percent oxygen from the No. 4 Lime Kiln **(ID No. G09028),**
   (B) 0.10 gr/dscf, corrected to 10 percent oxygen from the No. 5 Lime Kiln **(ID No. G09029)**,
   (C) 0.032 gr/dscf, corrected to 8 percent oxygen from the No. 10 Recovery Furnace **(ID No. G08020)**,
   (D) 0.032 gr/dscf, corrected to 8 percent oxygen from the No. 11 Recovery Furnace **(ID No. G08021)**,
   (E) 0.268 gr/dscf from the No. 10 Smelt Dissolving Tank **(ID No. G08023)**, and
   (F) 0.321 gr/dscf from the No. 11 Smelt Dissolving Tank **(ID No. G08024)**

ii. The Permittee shall comply with the work practice standards specified in Section 2.2 G.1 through G.3, below, during startup, shutdown, and malfunction events.

c. The chemical recovery system emission limits in Section 2.2 D.1.b, above, must be re-established if either of the following occur:
   i. the air pollution control system for the No. 4 or 5 Lime Kiln **(ID No. G09028 or G09029)**, No. 10 or 11 Recovery Furnace **(ID No. G08020 or G08021)**, or No. 10 or 11 Smelt Dissolving Tank **(ID No. G08023 and G08024)** is modified (as defined in 63.861) or replaced; or
   ii. the Nos. 4 or 5 Lime Kiln **(ID Nos. G09028 or G09029)**, Nos. 10 or 11 Recovery Furnace **(ID Nos. G08020 or G08021)**, or Nos. 10 or 11 Smelt Dissolving Tank **(ID Nos. G08023 and G08024)** is shut down for more than 60 consecutive days. [40 CFR 63.862(a)(1)(ii)(D)]

Testing [15A NCAC 02D .1111]

d. If emissions testing is required to re-establish the chemical recovery system emission limits in Section 2.2 D.1.b, above, emissions testing shall be performed according to the procedures in 63.7, 63.865, and General Condition JJ. If the results of the testing indicate that the chemical recovery system emission rate is greater than the emission limits presented in the table above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111. [40 CFR 63.865]

Monitoring [15A NCAC 02D .1111]

e. The Permittee must install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) at the outlet of the No. 10 Recovery Furnace ESP **(ID No. 08-CD-001-01)** and No. 11 Recovery Furnace ESP **(ID No. 08-CD-002-01)** according to the procedures in 40 CFR 63.3(h) and 63.8. [40 CFR 63.864(d)(3) and (d)(4)]
   i. Each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.
   ii. The COMS data must be reduced as specified in 40 CFR 63.8(g)(2).

   If these monitoring procedures are not followed, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111

f. The Permittee must install, calibrate, maintain, and operate a continuous monitoring system that can be used to determine and record the pressure drop across the scrubber and the scrubbing liquid flow rate on the No. 4 Lime Kiln Scrubber **(ID No. 08-CD-009-01)**, No. 5 Lime Kiln Scrubber **(ID No. 09-CD-010-01)**, No. 10 Smelt Dissolving Tank Scrubber **(ID No. 08-CD-011-01)**, and No. 11 Smelt Dissolving Tank Scrubber **(ID No. 08-CD-012-01)**. Pressure drop and scrubbing liquid flow rate must be recorded at least once every successive 15-minute period using the procedures in 40 CFR 63.8(c), as well as the following procedures [63.864(e)(10)]:
   i. The monitoring device used for the continuous measurement of the pressure drop of the gas stream across the scrubber must be certified by the manufacturer to the accurate to within a gauge pressure of ±500 Pascals (±2 inches of water gauge pressure); and
   ii. The monitoring device used for continuous measurement of the scrubbing liquid flow rate must be certified by the manufacturer to be accurate within ±5 percent of the design scrubbing liquid flow rate.

   If these monitoring procedures are not followed, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

g. The Permittee shall establish operating ranges for the monitoring parameters in Section 2.2 D.1.f, above. [40 CFR 63.864(j)]
   i. The Permittee shall base operating ranges on values recorded during the initial performance tests or conduct additional performance tests for the specific purpose of establishing operating ranges, provided that test data used to establish the operating ranges are or have been obtained using the test methods required in 40 CFR Part 63, Subpart MM. The Permittee must certify that all control devices and processes have not been

modified subsequent to the testing upon which the data used to establish the operating parameter ranges were obtained.

ii. The Permittee may establish expanded or replacement operating ranges for the monitoring parameter values in Section 2.2 D.1.f, above, during subsequent performance tests using the test methods in 40 CFR 63.865.

iii. The Permittee must continuously monitor each parameter and determine the arithmetic average value of each parameter during each performance test. Multiple performance tests may be conducted to establish a range of parameter values.

iv. If the Permittee reevaluates compliance with the emission limit in Section 2.2 D.1.b, above, at parameter ranges outside of those in Table 2.2 D-2 below, the Permittee shall, upon approval by the DAQ, attach the approval memo containing the revised operating parameters to this permit and maintain the parameters in the associated operating ranges contained therein.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the operating ranges for the specified monitoring parameters are not established as required above.

h. The Permittee is required to implement corrective action, as specified in the startup, shutdown, and malfunction plan prepared under 40 CFR 63.866(a), if the following monitoring exceedances occur [40 CFR 63.864(k)(1)]:

i. For the Nos. 10 and 11 Recovery Furnaces **(ID Nos. G08020 and G08021)**, when the average of ten consecutive 6-minute averages results in a measurement greater than 20 percent opacity;

ii. For the Nos. 4 and 5 Lime Kilns **(ID Nos. G09028 and G09029)** and the Nos. 10 and 11 Smelt Dissolving Tanks **(ID Nos. G08023 and G08024)**, when any 3-hour average wet scrubber parameter value established in Section 2.2 D.1.g, above, is outside the range of values established during performance testing as indicated in Table 2.2 D-2, below.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if corrective action is not implemented for the monitoring exceedances above.

i. The Permittee is in noncompliance of the standards Section 2.2 D.1.b and D.1.c, above, if the following monitoring exceedances occur [40 CFR 63.864(k)(2)]:

i. For Nos. 10 and 11 Recovery Furnaces, when opacity is greater than 35 percent for 6 percent or more of the operating time within any quarterly period;

ii. For Nos. 4 and 5 Lime Kilns and Nos. 10 and 11 Smelt Dissolving Tanks, when six or more 3-hour average parameter values within any 6-month reporting period are outside the range of values established during performance testing as indicated in Table 2.2 D-2, below.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 these monitoring exceedances occur. The established continuous compliance monitoring parameters shall not apply during any required subsequent testing.

Table 2.2 D-2

Source Description	Parameter Values
No. 4 Lime Kiln	1. Scrubber recirculation liquid flow [FT1958] shall be no less than 289 gpm (3-hour average), and 2. Scrubber differential pressure [PT0018] shall be no less than 20 in. H_2O (3-hour average).
No. 5 Lime Kiln	1. Scrubber venturi liquid flow [FT3173] shall be no less than 224 gpm (3-hour average), 2. Scrubber quench liquid flow [FT3172] shall be no less than 152 gpm (3-hour average), and 3. Scrubber differential pressure shall be no less than 19.2 in. H_2O (3-hour average).
No. 10 Smelt Dissolving Tank	1. Scrubber liquid flow to firing floor shall be no less than 30 gpm (3-hour average), and 2. Scrubber pressure drop shall be no less than 0.12 in H_2O (3-hr average).
No. 11 Smelt Dissolving Tank	1. Scrubber liquid flow to demister system shall be no less than 74 gpm (3-hour average); and 2. Scrubber pressure drop shall be no less than 1.50 inches H2O (3-hr average).

j. For purposes of determining the number of non-opacity monitoring excursions, no more than one excursion will be attributed in any given 24-hour period. [63.864(k)(3)]

Recordkeeping [15A NCAC 02D .1111]

k. The Permittee must develop and implement a written SSM plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and control systems used to comply with Section 2.2 D. In addition to the information required in 40 CFR 63.6(e), the plan must include the requirements given in 63.866(a)(1) and (2). [40 CFR 63.866(a)]
   i. Procedures for responding to any process parameter level that is inconsistent with the level(s) established under Section 2.2 D.1.g, above, including the following procedures.
      (A) Procedures to determine and record the cause of an operating parameter exceedance and the time the exceedance began and ended; and
      (B) Corrective actions to be taken in the event of an operating parameter exceedance, including procedures for recording the actions taken to correct the exceedance.
   ii. The startup, shutdown, and malfunction plan also must include the following schedules.
      (A) A maintenance schedule for each ESP installed on the Nos. 10 and 11 Recovery Furnaces **(ID Nos. G08020 and G08021)** and each scrubber installed on the Nos. 4 and 5 Lime Kilns **(ID Nos. G09028 and G09029)**, and Nos. 10 and 11 Smelt Dissolving Tanks **(ID Nos. G08023 and G08024)**, that is consistent with, but not limited to, the manufacturer's instructions and recommendations for routine and long-term maintenance; and
      (B) An inspection schedule for each continuous monitoring system installed on the Nos. 4 and 5 Lime Kilns **(ID Nos. G09028 and G09029)**, the Nos. 10 and 11 Recovery Furnaces **(ID Nos. G08020 and G08021)**, and the Nos. 10 and 11 Smelt Dissolving Tank **(ID Nos. G08023 and G08024)** as specified in Section 2.2 D.1.e and D.1.f, above, to ensure, at least once in each 24-hour period, that each continuous monitoring system is properly functioning.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the SSM plan is not written and maintained as described above.

l. The Permittee must maintain records of any occurrence when corrective action is required under Section 2.2 D.1.h, above, and when period of noncompliance is noted under Section 2.2 D.1.i, above. [40 CFR 63.866(b)]

m. In addition to the general records required by 40 CFR 63.10(b)(2), the Permittee must maintain records of the following information [40 CFR 63.866(c)]:
   i. Records of black liquor solids firing rates in units of tons per day for the Nos. 10 and 11 Recovery Furnaces **(ID Nos. G08020 and G08021)**;
   ii. Records of CaO production rates in units of tons per day for the Nos. 4 and 5 Lime Kilns **(ID Nos. G09028 and G09029)**;
   iii. Records of parameter monitoring data required under Section 2.2 D.1.e and D.1.f, above, including any period when the operating parameter levels were inconsistent with the levels established during the initial performance test or subsequent testing, with a brief explanation of the cause of the deviation, the time the deviation occurred, the time corrective action was initiated and completed, and the corrective action taken;
   iv. Records and documentation of supporting calculations for the chemical recovery system emissions limit in Section 2.2 D.1.b, above;
   v. Records of monitoring parameter ranges established under Section 2.2 D.1.g, and specified in Table 2.2 D-2; and
   vi. Records of the hours of operation of the Nos. 4 and 5 Lime Kilns **(ID Nos. G09028 and G09029)**, the Nos. 10 and 11 Recovery Furnaces **(ID Nos. G08020 and G08021)**, and the Nos. 10 and 11 Smelt Dissolving Tanks **(ID Nos. G08023 and G08024)**.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 these records are not maintained.

Reporting [15A NCAC 02D .1111]

n. After the Director has approved the emissions limits for any process unit, the Permittee must notify the Director before any of the following actions are taken [40 CFR 63.867(b)(3)]:
   i. Any of the air pollution control systems for the Nos. 4 or 5 Lime Kiln **(ID No. G09028 or G09029)**, Nos. 10 or 11 Recovery Furnace **(ID No. G08020 or G08021)**, or Nos. 10 or 11 Smelt Dissolving Tank **(ID No. G08023 and G08024)** are modified or replaced;
   ii. The Nos. 4 or 5 Lime Kiln **(ID No. G09028 or G09029)**, Nos. 10 or 11 Recovery Furnace **(ID No. G08020 or G08021)**, or Nos. 10 or 11 Smelt Dissolving Tank **(ID No. G08023 and G08024)** is shut down for more than 60 consecutive days;

iii. A continuous monitoring parameter or the value or range of values of a continuous monitoring parameter in Table 2.2 D-2, above, is changed; or
iv. The black liquor solids firing rate for Nos. 10 or No. 11 Recovery Furnaces **(ID Nos. G08020 or G08021)** during any 24-hour averaging period is increased by more than 10 percent above the level measured during the most recent performance test.

o. The Permittee shall recalculate the overall PM emissions limit in Section 2.2 D.1.b, above, for the Nos. 4 and 5 Lime Kilns **(ID Nos. G09028 and G09029)**, Nos. 10 and 11 Recovery Furnaces **(ID Nos. G08020 and G08021)**, or Nos. 10 or 11 Smelt Dissolving Tank **(ID Nos. G08023 and G08024)** and resubmit the calculations and supporting documentation used to determine the PM emission limit, if either of the following actions are taken. All modified PM emissions limits are subject to approval by the Director. [40 CFR 63.867(b)(4)]
i. Modifying or replacing the air pollution control device for the Nos. 4 or 5 Lime Kiln **(ID Nos. G09028 or G09029)**, Nos. 10 or 11 Recovery Furnace **(ID Nos. G08020 or G08021)**, or Nos. 10 or 11 Smelt Dissolving Tank **(ID Nos. G08023 and G08024)**; or
ii. Shutting down any of the Nos. 4 or 5 Lime Kiln **(ID Nos. G09028 or G09029)**, Nos. 10 or 11 Recovery Furnace **(ID Nos. G08020 or G08021)**, or Nos. 10 or 11 Smelt Dissolving Tank **(ID Nos. G08023 and G08024)** for more than 60 consecutive days.

p. The Permittee shall submit a report each quarter if measured parameters meet any of the conditions specified in Section 2.2 D.1.i. This report must contain the information specified in 40 CFR 63.10(c) as well as the number and duration of occurrences when the source met or exceeded the conditions in Section 2.2 D.1.h, and the number and duration of occurrences when the source met or exceeded the conditions in Section 2.2 D.1.i. All instances of deviations from the requirements of this permit must be clearly identified in the report. Reporting excess emissions below the violation thresholds of Section 2.2 D.1.h and D.1.i does not constitute a violation of the applicable standard. [40 CFR 63.867(c)]
i. When no exceedances of parameters have occurred, the Permittee must submit a semiannual report stating that no excess emissions occurred during the reporting period.
ii. The Permittee may combine excess emissions and/or summary reports for the facility for Sections 2.2 C and D.

E. Big Bill (ID No. G11037) – equipped with low NO_X burners and a 2-chamber, 3-field electrostatic precipitator (ID No. 11-CD-003-01);

Peter G (ID No. G11038) – equipped with low NO_X burners and a 2-chamber, 3-field electrostatic precipitator (ID No. 11-CD-004-01); and

Riley Coal (ID No. G11039) – equipped with low NO_X burners; a 2-chamber, 3-field electrostatic precipitator (ID No. 11-CD-005-01); and a wet scrubber (ID No. 11-CD-005-02)

No. 4 Power Boiler (ID No. G11040) – equipped with low NO_X burner components; a Separated Over Fire Air (SOFA) system; a 2-chamber, 4-field electrostatic precipitator (ID No. 11-CD-006-01); a urea-based Selective Non-Catalytic Reduction (SNCR) NO_X emission reduction system (ID No. 11-CD-006-02); and a wet scrubber* (ID No. 11-CD-03).

Riley Bark Boiler (ID No. G11042) – with partial flyash reinjection and grate fire ignition (kerosene and rags), equipped with a multicyclone (ID No. 11-CD- 016-01) in series with a venturi-type wet scrubber (ID No. 11-CD-016-02).

NOTE: The wet scrubbers installed on Riley Coal and No. 4 Power Boiler are not necessary for compliance with any currently applicable regulation.

1. 15A NCAC 02D .1109: CAA § 112(j); CASE-BY-CASE MACT FOR BOILERS

Emission Limitations

a. **The initial compliance date for these emission limitations and associated monitoring, recordkeeping, and reporting requirements is March 28, 2015.** These conditions need not be included on the annual compliance certification until after the initial compliance date.

Emissions from each source listed above shall not exceed the emission limits listed below:

Pollutant	Emission Limitations (30-day rolling average)	Fuel Combusted
PM	0.45 lb/MMBtu	No. 4 and No. 6 fuel oil
	0.44 lb/MMBtu	Biomass
	0.08 lb/MMBtu	Coal
Hydrogen chloride	0.02 lb/MMBtu	Biomass
	0.05 lb/MMBtu	Coal
Carbon Monoxide (CO)	28 ppmvd@7%O_2 (0.028 lb/MMBtu)*	No. 4 and No. 6 fuel oil
	2174 ppmvd@7%O_2	Biomass
	133 ppmvd@7%O_2 (0.14 lb/MMBtu)*	Coal
Mercury (Hg)	0.01 lb/hr	Any

* Calculated based on EPA Method 19, equation 19.1 for the purposes of monitoring compliance as detailed below

Emissions from the following sources shall not exceed the emission limits listed below:

Pollutant	Big Bill G11037 (lb/hr)	Peter G G11038 (lb/hr)	Riley Coal G11039 (lb/hr)	No. 4 G11040 (lb/hr)	Riley Bark G11042 (lb/hr)
Hydrogen fluoride (HF)	2.13	2.13	2.34	3.13	2.23
Hydrogen cyanide (HCN)	0.22	0.22	0.24	0.32	0.23

The emissions limitations for PM, HCl, and CO are proportional to the heat input of the particular fuels combusted for the power boilers **(ID Nos. G11037 through G11040)**. For the Riley bark boiler **(ID No. G11042)**, the biomass limits for PM and CO shall apply under all firing conditions as long as biomass comprises greater than 10% of the annual heating contribution to that unit.

PM

$$\mathbf{E_{PM} = [(0.44)(GW) + 0.08(C) + 0.45(RFO)]/(GW + C + RFO)}$$

Where:
E_{PM} = PM emission limitation in pounds per million Btu,
GW = heat input of green wood in million Btu per hour, and
C = heat input of coal in million Btu per hour.
RFO = heat input of residual No. 4/6 fuel oil in million Btu per hour

HCl

$$\mathbf{E_{HCl} = [(0.\ 02)(GW) + 0.05(C)]/(GW + C)}$$

Where:
E_{HCl} = HCl emission limitation in pounds per million Btu,
GW = heat input of green wood in million Btu per hour, and
C = heat input of coal in million Btu per hour

Carbon monoxide (when firing coal and fuel oil):

$$\mathbf{E_{CO} = [(0.14)(C) + (0.028)(RFO)]/(C + RFO)}$$

Where:
E_{CO} = CO emission limitation in pounds per million Btu
C = heat input of coal in million Btu per hour, and
RFO = heat input of residual No. 4/6 fuel oil in million Btu per hour

b. The Permittee shall comply with this CAA §112(j) standard until May 19, 2019. The initial compliance date for the applicable CAA §112(d) standard for ''National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters" is May 20, 2019.

c. The emissions limitations for a specific fuel type in Section 2.2. E.a above shall only apply when the Permittee fires at least 10% of that fuel in a boiler on a 12-month rolling average heat input basis. If the Permittee fires less than 10% of a specific fuel in a boiler on a 12-month rolling average heat input basis, the respective emissions limitations and the associated testing, monitoring, and recordkeeping shall not apply. However, the Permittee shall retain records of the fuels fired in the boiler in accordance with the conditions of this permit. The Permittee shall maintain records of annual heating content from biomass firing in the Riley Bark Boiler **(ID No. G11042)**.

d. Emissions averaging across all affected boilers **(ID Nos. G11037 through G11040 and G11042)** may be used for compliance with the PM, CO, and HCl emission limits. The following equation shall be used for emissions averaging:

$$\text{Average weighted emissions} = \sum (\text{Emission rate}_i * \text{monthly heat input}_i)$$

Where:

Average weighted emissions	=	average weighted emissions for PM, HCl, or CO in lb/MMBtu
Emission rate$_i$	=	emission rate for boiler i (as calculated using fuel analysis or as measured using CEMS or during the most recent performance test) for PM, HCl, or CO in lb/MMBtu
Monthly heat input$_i$	=	monthly total heat input for boiler i for each fuel for which a limit applies, measured in MMBtu (based on the records required under Section 2.2 E.1.p)

Operating and Monitoring Requirements (PM and HCl)[15A NCAC 02Q .0508(f)]

e. The Permittee shall install, operate and maintain control devices and continuous monitoring systems (CMS) for the Big Bill boiler **(ID No. G11037)**, Peter G. boiler **(ID No. G11038)**, Riley Coal boiler **(ID No. G11039)**, No. 4 Power Boiler **(ID No. G11040)**, and Riley Bark Boiler **(ID No. G11042)** as follows:
   i. PM emissions from Big Bill boiler **(ID No. G11037)**, Peter G. boiler **(ID No. G11038)**, Riley Coal boiler **(ID No. G11039)**, and No. 4 Power Boiler **(ID No. G11040)** shall be continuously controlled by their respective ESPs **(ID Nos. 11-CD-003-01, 11-CD-004-01, No. 11-CD-005-01, and 11-CD-006-01)**. PM and HCl emissions from Riley Bark Boiler **(ID No. G11042)** shall be continuously controlled by a wet scrubber **(ID No. 11-CD-016-02)**.
   ii. The Permittee shall perform monthly inspections of the ESPs and scrubber and perform maintenance as recommended by the manufacturer.
   iii. The Permittee shall install, operate, and maintain an opacity monitor at the exhaust of Big Bill boiler **(ID No. G11037)**, Peter G. boiler **(ID No. G11038)**, Riley Coal boiler **(ID No. G11039)**, and No. 4 Power Boiler **(ID No. G11040)**. The Permittee shall maintain the 30-operating day rolling average opacity, calculated daily, at or below the opacity operating limit established in accordance with Section 2.2 E.1.r, below, for each power boiler.
   iv. The Permittee shall install, operate, and maintain a scrubbing liquid pH monitor (CPMS), a liquid flow meter (CPMS) and a gas pressure drop indicator (CPMS) on the Riley Bark Boiler **(ID No. G11042)** wet scrubber **(ID No. 11-CD-016-02)**.
   v. The Permittee shall maintain the 12-hour average scrubbing liquid pH level, pressure drop and liquid flow-rate for the Riley Bark Boiler **(ID No. G11042)** wet scrubber **(ID No. 11-CD-016-02)** at or above the operating levels, adjusted for variability, established during the performance test(s) that demonstrated compliance with the applicable emission limits.
   vi. Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall monitor continuously (or collect data at all required intervals) at all times that the affected source is operating.
   vii. For purposes of calculating data averages, the Permittee may not use data recorded during periods of monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities. The Permittee must use all the data collected during all other periods in assessing compliance.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the control devices and continuous monitoring systems are not operated as required.

Operating and Monitoring Requirements (CO)[15A NCAC 02Q .0508(f)]

f. The Permittee must install, operate, and maintain a continuous parameter monitoring system (CPMS) for oxygen according to the procedures listed in Section 2.2 E.1.f.i through E.1.f.vii, below. The oxygen concentration shall be monitored at the outlet of the Big Bill boiler **(ID No. G11037)**, the Peter G. boiler **(ID No. G11038)**, the Riley Coal boiler **(ID No. G11039)**, the No. 4 Power Boiler **(ID No. G11040)**, and the Riley Bark Boiler **(ID No. G11042)**.
   i. The Permittee shall install, operate, and maintain each CPMS according to the site-specific monitoring plan, submitted according to Section 2.2 E.1.g, below.
   ii. The Permittee shall follow the manufacturer's recommendations for scheduled maintenance and calibration.
   iii. Each CPMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
   iv. The Permittee shall calculate and record a 30-operating day rolling average oxygen concentration on a daily basis. A new 30-operating day rolling average oxygen concentration is calculated as the average of all of the hourly oxygen data for the preceding 30 operating days.
   v. Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall monitor continuously (or collect data at all required intervals) at all times that the affected source is operating.

vi. For purposes of calculating data averages, the Permittee may not use data recorded during periods of monitoring malfunctions, associated repairs, out-of-control periods, required quality assurance or control activities, or when the boiler or process heater is operating at less than 50 percent of its rated capacity. The Permittee must use all the data collected during all other periods in assessing compliance.

vii. A 30-day rolling average oxygen concentration below the oxygen operating limit shall constitute a violation of the standard.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the oxygen CPMS is not installed, operated, and maintained as required.

Site Specific Monitoring Plan

g. The Permittee must develop a site-specific monitoring plan for each required CPMS. The plan shall be submitted to the NC DAQ Stationary Source Compliance Branch (SSCB) at least 60 days before the initial performance evaluation of the CPMS. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the site specific monitoring plan is not developed as required.

Performance Testing

h. Performance testing shall be conducted in accordance with General Condition JJ.

i. No performance testing is required if:
   i. The facility can demonstrate compliance with any applicable emission limit using fuel analysis according to the procedures in the DAQ approved site-specific fuel analysis plan.
   ii. The affected boiler only fires gaseous fuel and/or virgin or recycled distillate fuel oil, and complies with the initial compliance demonstration, the monitoring/recordkeeping; and the notification requirements of this condition.

j. No performance testing or fuel analysis is required for HF and HCN.

Fuel Analyses Plan

k. If the Permittee chooses to demonstrate compliance with this standard using one or more fuel analyses, the analyses shall be conducted according to a DAQ approved site-specific fuel analysis plan.

l. The Permittee shall develop and submit a site-specific fuel analysis plan to the NC DAQ – SSCB for review and approval no later than 60 days before the date that the Permittee plans to demonstrate compliance. Unless otherwise approved or required, the fuel analysis shall be conducted in accordance the most recent NC DAQ approved Site Specific Boiler MACT Fuel Sampling Plan, referenced henceforth as the "Canton Mill Fuel Sampling Plan." The current Canton Mill Fuel Sampling Plan was approved by the NC DAQ February 2007. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the site-specific fuel analysis is not conducted according to the approved fuel analysis plan.

Initial Compliance Requirements

m. The Permittee must demonstrate initial compliance with each emission limit and work practice standard that applies by either:
   i. Conducting initial performance tests and establishing required operating limits within 180 days of the initial compliance date;
   ii. Conducting initial fuel analyses to determine emission rates and establishing required operating limits within 180 days of the initial compliance date; or,
   iii. Where a source is firing only gaseous fuel and/or distillate fuel oil retain records demonstrating that the source only fires these fuels. An acceptable record may include a fuel oil certification from the vendor or receipts for fuel oil, natural gas, propane, and/or liquefied petroleum gas purchased by the facility.
   iv. After the initial compliance date, if the 12-month average heat input of a fuel not accounted for during the initial compliance demonstration is equal to or greater than 10% for any 12-month period, the Permittee shall conduct an initial compliance test within 90 days following the end of the 12-month period (unless such date is earlier than 180 days following the initial compliance date, in which case the test shall be performed 180 days following the initial compliance date). Monitoring and recordkeeping requirements associated with the specific fuel firing shall be implemented as soon as practicable, and in no case later than 90 days following the end of the 12-month period.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if initial compliance is not demonstrated as required above.

Compliance Demonstrations [15A NCAC 02Q .0508(f)]

n. The Permittee shall demonstrate compliance with the PM, mercury, and HCl emission limitations in Section 2.2 E.1.a, above, as follows:
   i. The Permittee shall demonstrate compliance with the PM emission limitations using performance testing.
   ii. The Permittee shall demonstrate compliance with the mercury emission limitations by either performance testing or fuel analysis.
   iii. The Permittee shall demonstrate compliance with the HCl limitations by:
      (A) fuel analysis for Big Bill **(ID No. G11037)**, Peter G. **(ID No. G11038)**, Riley Coal **(ID No. G11039)**, and No. 4 Power Boiler **(ID No. G11040)**;
      (B) either performance testing or fuel analysis for and Riley Bark Boiler **(ID No. G11042)**.
   iv. The Permittee shall demonstrate compliance with the carbon monoxide (CO) emission limitations using performance testing.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if performance testing is not used to demonstrate compliance with the emission limitations as required above.

o. If the Permittee uses performance testing to demonstrate compliance with the standard, the Permittee must conduct all applicable performance tests on an annual basis, unless it meets the requirements listed below. Annual performance tests, if required, must be completed between 11 and 13 months after the previous performance test.
   i. The Permittee may conduct performance tests less often for a given pollutant if the performance tests for at least 3 consecutive years show the emission rate is less than or equal to 80 percent of the allowable limit. In this case, the Permittee need not conduct a performance test for that pollutant for the next 2 years, but must conduct a performance test during each third year and no more than 36 months after the previous performance test.
   ii. If the affected boiler or process heater continues to meet the emission limit, the Permittee may conduct performance tests every third year, but each such performance test must be conducted no more than 36 months after the previous performance test.
   iii. If a performance test shows noncompliance with an emission limit, the Permittee must conduct annual performance tests for that pollutant until all performance tests over a consecutive 3-year period show the emission rate is less than or equal to 80 percent of the allowable limit.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if performance testing shows an exceedance of a limit in Section 2.2 E.1.a, above.

p. If the Permittee uses fuel analysis to demonstrate compliance with the standard:
   i. The Permittee must conduct a fuel analysis on an annual basis for each fuel which contributes at least 10% of the 12-month average heat input of the fuels burned in the boiler.
   ii. Each fuel analysis shall be conducted between 11 and 13 months after the previous analysis.
   iii. If a fuel analysis shows a potential exceedance of an emission limitation in Section 2.2 E.1.a or E.1.d, above, the Permittee shall conduct a follow-up stack test of the affected source within 90 days.
   iv. If all fuel samples show a compound is below the detection limit, emissions of that compound can be considered zero. If some samples show the compound is detected, any non-detect values shall be considered at half the detection limit.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the Permittee cannot conduct a follow-up test within 90 days or the follow-up test shows an exceedance of the emission limitation in Section 2.2 E.1.a, above.

q. The Permittee must report the results of performance tests and fuel analyses within 60 days after the completion of the performance tests or fuel analyses. This report should also verify that the operating limits for your affected source have not changed or provide documentation of revised operating parameters.

r. The Permittee shall establish 30-operating day opacity monitoring levels for the Big Bill boiler **(ID No. G11037)**, the Peter G. boiler **(ID No. G11038)**, the Riley Coal boiler **(ID No. G11039)**, and the No. 4 Power Boiler **(ID No. G11040)**; as follows:

Pollutant(s)	Requirements for Performance Test
PM	1. The Permittee shall collect 1-minute opacity data during the entirety of each performance test; and, 2. Incorporate the 1-minute opacity data from compliant stack tests into the approved data set. The approved data set will include 1-minute opacity data recorded during stack tests that, with the use of emission averaging, demonstrate compliance with the PM standards from the year 2007 forward. 3. Utilize the Monte Carlo statistical method to extrapolate the data set to a 30-day period as necessary. 4. Calculate the 98% Confidence Level for the data set for each Power Boiler.

The maximum 30-operating data rolling opacity shall be based on the 98% Confidence Level calculated using the approved data set for each Power Boiler. The established 30-operating day maximum opacity monitoring levels for the affected sources are as follows:

Continuous Monitoring Parameter	Big Bill G11037 (%)	Peter G G11038 (%)	Riley Coal G11039 (%)	No. 4 G11040 (%)
Opacity	13.2	10.1	12.7	8.8

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the maximum opacity monitoring levels are not established as required above.

s. The Permittee shall establish operating parameters for the wet scrubber controlling emissions from the Riley Bark boiler **(ID No. G11042)** as follows:

Pollutant(s)	Requirements for Performance Test
PM, HCl	1. Collect pressure drop, liquid flow rate, and pH data every 15 minutes during the entire period of the performance test; and, 2. Determine the average pressure drop, liquid flow rate, and pH for each individual test run in the 3-run performance test by computing the average of all the 15-minute readings taken during each test run.

The minimum pressure drop, liquid flow rate, and pH shall be the lowest test run average value during any performance test that shows compliance with the emission limit. If the Permittee reevaluates compliance with the emission limit in Section 2.2 E.1.a, above, at parameter ranges outside of those listed below, the Permittee shall, upon approval by the DAQ, attach the approval memo containing the revised operating parameters to this permit and maintain the parameters in the associated operating ranges contained therein.
The established operating parameters for the wet scrubber installed on the Riley Bark Boiler **(ID No. G11042)** shall be as follows:

i. The minimum scrubbing liquid shall be 602 gallons per minute (12-hour block average);
ii. The minimum scrubbing liquid pH shall be 5.0 (12-hour block average);
iii. The minimum pressure drop across the scrubber shall be 12.0 inches of water column (12-hour block average).

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the operating parameters are not established and maintained as described above. The established continuous compliance monitoring parameters shall not apply during any required subsequent testing.

t. The Permittee shall establish oxygen concentration operating parameter levels for each boiler **(ID Nos. G11037 through G11040 and G11042)** as follows:

Pollutant(s)	Requirements for Performance Test
CO	1. Collect oxygen data every 15 minutes during the entire period of the performance test; 2. Determine the hourly average oxygen concentration by computing the hourly averages using all of the 15-minue readings taken during each performance test; and, 3. Determine the lowest hourly average established during the performance test as the minimum operating limit.

The 30-operating data oxygen concentration shall be based on approved data set for each Power Boiler. The established 30-operating day oxygen monitoring levels for the affected sources are as follows:

Continuous Monitoring Parameter	Big Bill G11037 (%)	Peter G G11038 (%)	Riley Coal G11039 (%)	No. 4 G11040 (%)	Riley Bark (G11042) (%)
Oxygen	8.1	9.9	6.3	2.9	10.8

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the oxygen monitoring levels are not established and maintained as described above.

Fuel Use and Monitoring Requirements [15A NCAC 02Q .0508(f)]

u. Whenever fuel analysis is used to comply with any HAP limit in Section 2.2 E.1.a above, the Permittee shall:
   i. maintain the fuel type or fuel mixture such that the HAP emission rates are less than the applicable emission limit; and
   ii. maintain records of the type and amount of all fuels burned in each affected source during the reporting period to demonstrate that:
      (A) All fuel types and mixtures of fuels burned result in HCl and mercury emissions that are lower than the applicable emission limit for each pollutant (if the facility demonstrates compliance using fuel analysis); or,
      (B) All fuel types and mixtures of fuels burned result in lower fuel input of selected metals, chlorine, and mercury than the maximum values calculated during the last performance tests (if the facility demonstrates compliance through performance testing).

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the fuel analysis, when used, is not conducted as required above.

v. If the Permittee limits the firing of a specific fuel to less than 10% on 12-month average heat input basis, the Permittee shall create and retain the following records at least once per calendar month:
   i. Record the fuel use by each affected source, including the type(s) of fuel and amount(s) used, during the previous calendar month; and,
   ii. Calculate the 12-month average heat input from each fuel for each affected source during the previous 12-month period.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these records are not created and retained as required above.

w. The Permittee shall create and retain a record of the amounts of each fuel fired in the Big Bill boiler **(ID No. G11037)**, Peter G. boiler **(ID No. G11038)**, Riley Coal boiler **(ID No. G11039)**, No. 4 Power Boiler **(ID No. G11040)**, and Riley Bark Boiler **(ID No. G11042)** during the previous calendar month. The monthly fuel combustion records shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these records are not maintained or if the boiler fires a fuel other than No. 6 fuel oil, No. 4 equivalent fuel oil, coal, or biomass (additionally, use of natural gas igniters is allowed for startup of Big Bill, Peter G, and Riley Coal boilers and use of ultra-low sulfur No. 2 fuel oil is allowed for startup of Big Bill and No. 4 Power Boilers).

Recordkeeping/Reporting Requirements [15A NCAC 02Q .0508(f)]

x. The Permittee shall maintain records of the continuous and 30-operating day rolling average opacity calculated daily for each boiler **(ID Nos. G11037 through G11040 and G11042)**, except as specified in Section 2.2 E.1.e, above. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the above records are not created and maintained, or if any 30-operating day rolling average is not within the allowable limit established according to this permit condition. If a 30-operating day opacity level is exceeded for any Power Boiler, the Permittee may elect to perform a compliance demonstration within 30-days to demonstrate compliance with the PM standard at the new level.

y. The Permittee shall maintain records of the continuous and 12-hour block average liquid flow rate, pressure drop, and pH for the Riley Bark boiler wet scrubber **(ID No. 11-CD-016-02)**. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the above records are not created and maintained, or if any 12-hour block average is not within the allowable limit established according to this permit condition. The established continuous compliance monitoring parameters shall not apply during any required subsequent testing.

Additional Recordkeeping Requirements

z. In addition to the recordkeeping requirements above, the Permittee shall maintain the following in a logbook (written or electronic format) on-site and made available to an authorized representative upon request:
   i. A copy of each notification and report required by this standard, including all documentation supporting any Notification of Compliance Status;
   ii. Records of performance tests, fuel analyses, or other compliance demonstrations, and CEMS, COMS, and CMS performance evaluations;
   iii. Records of the CPMS measurements needed to demonstrate compliance with a relevant standard or operating limit (including, but not limited to raw performance testing and evaluation measurements;
   iv. A record of each period during which a CPMS is malfunctioning or inoperative (including out-of-control periods);
   v. Records of all CPMS calibration checks and all adjustments and maintenance performed on the CPMS;
   vi. Records of all monitoring data and calculated averages for applicable operating limits such as, pressure drop, flow rate, oxygen content, opacity and pH used to demonstrate compliance with the standard;
   vii. Records of monthly fuel use by each affected source, including the type(s) of fuel and amount(s) used.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

aa. Notification of Compliance Status. The Permittee shall submit a Notification of Compliance Status in accordance with 40 CFR 63.9(h)(2)(ii) within 60 days of completion of the final performance test or fuel analyses required for the initial compliance demonstration. This requirement was satisfied with the submittal of stack test reports between November 16 through 22, 2015 (and amended January 18, 2016).

bb. Semiannual Summary Report. The Permittee shall submit a summary report postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The first summary report shall be required after the initial compliance date but no sooner than January 30, 2014. The report shall include the following:
   i. The company name and address;
   ii. A statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report;
   iii. The date of report and beginning and ending dates of the reporting period;
   iv. The lowest 30-day rolling average oxygen concentration measured during the preceding six-month period and identification of all periods during which the 30-day rolling average oxygen concentration exceeded the applicable emission limitation in Section 2.2 E.1.a above;
   v. Identification of all periods during which the average Riley Bark boiler wet scrubber liquid flow rate, pressure drop, or pH was measured outside of the allowable operating range over a 12-hour period;
   vi. Identification of all periods during which the average 30-operating day rolling opacity (as relevant) is in excess of the calculated monitoring level for Big Bill boiler, Peter G. boiler, Riley Coal boiler, or No. 4 Power Boiler;
   vii. A summary of the results of any annual stack tests or fuel analyses performed during the preceding six-month period;

viii. Emissions averaging calculations, where emissions averaging is being used to demonstrate compliance with the applicable emission limits; and

ix. A certification signed by the Responsible Official that the facility has met all applicable emission limits and work practice standards.

F. Two natural gas and/or propane hot oil heaters installed on the calendar section of No. 19 Paper Machine – G12077

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous air pollutants	Best Combustion Practices	15A NCAC 02D .1109

1. 15A NCAC 02D .1109: CAA § 112(J); CASE-BY-CASE MACT FOR PROCESS HEATERS

a. The Permittee shall use best combustion practices when operating the affected process heaters **(ID No. G12077)**. The initial compliance date for this work practice standard and the associated monitoring, recordkeeping, and reporting requirements is March 28, 2015. These conditions need not be included on the annual compliance certification until after the initial compliance date.

b. The Permittee shall comply with this CAA §112(j) standard until May 19, 2019. The initial compliance date for the applicable CAA §112(d) standard for ‘‘National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters” is May 20, 2019.

Monitoring/Recordkeeping

c. To ensure compliance, the Permittee shall perform biennial process heater inspection and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall include the following:
   i. Inspect the burner, and clean or replace any components of the burner as necessary;
   ii. Inspect the flame pattern and make any adjustments to the burner necessary to optimize the flame pattern; and,
   iii. Inspect the system controlling the air-to-fuel ratio, and ensure that it is correctly calibrated and functioning properly.

   The Permittee shall conduct at least one tune-up biennially to demonstrate compliance with this requirement. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the affected process heaters are not inspected and maintained as required above.

d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. The date of each recorded action;
   ii. The results of each inspection; and,
   iii. The results of any maintenance performed on the boilers.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. No reporting is required for hazardous air pollutants from the firing of natural gas or propane in these process heaters.

G. 15A NCAC 02D .1109: CAA 112(j); Case-by-case MACT for Start-up, Shutdown, or Malfunction (SSM) Conditions from Subpart S and Subpart MM affected sources

1. No. 10 and No. 11 Smelt Dissolving Tanks (ID Nos. G08023 and G08024)

Startup

a. For the Nos. 10 and 11 Smelt Dissolving Tanks **(ID Nos. G08023 and G08024)**, startup begins when black liquor is introduced to the associated recovery furnace. Startup of the smelt dissolving tanks ends 8 hours after the end of startup of the associated recovery furnace. End of startup of the recovery furnace is defined as the time when black liquor solids are greater than 62 percent, and pressure on the liquor nozzles is greater than 34 psig, and size 34 nozzles or greater are in the furnace, and the furnace has been off auxiliary startup fuel (oil and/or gas) for 6 hours. During the period of smelt dissolving tank startup, scrubbing liquid flows to the scrubbers will be adjusted to match smelt generation rate and minimize overflow of green liquor to the mill sewer system. By the end of the startup period, flows to the scrubbers will meet the specifications for normal operation as defined in Table 2.2 D-2. The period of startup for the smelt dissolving tanks managed in accordance with this work practice standard shall not be an excess emission under 40 CFR Part 63, Subpart MM or 15A NCAC 02D .1111. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these work practices are not conducted during startup.

Shutdown

b. For the Nos. 10 and 11 Smelt Dissolving Tanks **(ID Nos. G08023 and G08024)**, shutdown begins when auxiliary fuel (oil and/or gas) is introduced to the associated recovery furnace for the purposes of shutting down. Shutdown ends when the green liquor pump which transfers product from the smelt dissolving tank is shut down. During the period of smelt dissolving tank shutdown, scrubbing liquid flows to the scrubbers will be maintained at the specifications established for normal operation as defined in Table 2.2 D-2. The period of shutdown for the smelt dissolving tanks managed in accordance with this work practice standard shall not be an excess emission under 40 CFR Part 63, Subpart MM or 15A NCAC 02D .1111. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these work practices are not conducted during shutdown.

Malfunction

c. For the Nos. 10 and 11 Smelt Dissolving Tanks **(ID Nos. G08023 and G08024)**, the following work practice will be followed for parameter excursions due to malfunctions:
   i. Upon knowledge of the parameter excursion, operators will take immediate steps to identify the cause of the parameter excursion;
   ii. If the root cause of the parameter excursion cannot be determined within 5 operating hours from initial knowledge of parameter excursion, operators will initiate an orderly shutdown of the process. If the projected time to correct the parameter excursion exceeds 19 hours, operators will initiate an orderly shutdown of the process.
   iii. The parameter excursion shall be corrected as soon as practicable.

   The period of malfunction for the smelt dissolving tanks managed in accordance with this work practice standard shall not be an excess emission under 40 CFR Part 63, Subpart MM or 15A NCAC 02D .1111. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these work practices are not conducted during malfunction.

2. No. 10 and No. 11 Recovery Furnaces (ID Nos. G08020 and G08021)

Startup

a. For the Nos. 10 and 11 Recovery Furnaces **(ID Nos. G08020 and G08021)**, startup begins when auxiliary fuel (oil and/or gas) is introduced to the recovery furnace for the purpose of combusting black liquor. Startup ends when black liquor solids are greater than 62 percent, and pressure on the liquor nozzles is greater than 34 psig, and size 34 nozzles or greater are in the furnace, and the furnace has been off auxiliary startup fuel (oil and/or gas) for 6 hours. Operators will energize the associated electrostatic precipitator PRIOR to the introduction of black liquor to the liquor-firing nozzles. The period of startup for the recovery furnaces managed in accordance with this work practice standard shall not be an excess emission under 40 CFR Part 63, Subpart MM or 15A NCAC 02D .1111. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these work practices are not conducted during startup.

Shutdown

b. For the Nos. 10 and 11 Recovery Furnaces **(ID No. G08020 and G08021)**, shutdown begins when auxiliary fuel (oil and/or gas) is introduced to the recovery furnace for the purposes of shutting down. Shutdown ends when there is no combustion of fuel in the recovery furnace. During the period of recovery furnace shutdown, operators will operate the electrostatic precipitator until black liquor feed to the nozzles has ceased. The period of shutdown for the recovery furnaces managed in accordance with this work practice standard shall not be an excess emission under 40 CFR Part 63, Subpart MM or 15A NCAC 02D .1111. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these work practices are not conducted during shutdown.

Malfunction

c. For the Nos. 10 and 11 Recovery Furnaces **(ID Nos. G08020 and G08021)**, the following work practice will be followed for parameter excursions due to malfunctions:
   i. Upon knowledge of the parameter excursion, operators will take immediate steps to identify the root cause of the parameter excursion;
   ii. If the root cause of the parameter excursion cannot be determined within 5 operating hours from initial knowledge of parameter excursion, operators will initiate an orderly shutdown of the process. If the projected time to correct the parameter excursion exceeds 12 hours, operators will initiate an orderly shutdown of the process.
   iii. The parameter excursion shall be corrected as soon as practicable.

   The period of malfunction for the recovery furnaces managed in accordance with this work practice standard shall not be an excess emission under 40 CFR Part 63, Subpart MM or 15A NCAC 02D .1111. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these work practices are not conducted during malfunction.

3. No. 4 and No. 5 Lime Kilns

Startup

a. For the Nos. 4 and 5 Lime Kilns **(ID Nos. G09028 and G09029)**, startup begins when a burner flame is established to bring the operating temperature of the kiln above 1200 degrees F. Startup ends 12 hours after normal mudflow to the kiln has been established. Operators will operate the scrubber with scrubber flows meeting the specifications for normal operations as defined in Table 2.2 D-2 PRIOR to the introduction of lime mud to the kiln. The period of startup for the kilns managed in accordance with this work practice standard shall not be an excess emission under 40 CFR Part 63, Subpart MM or 15A NCAC 02D .1111. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these work practices are not conducted during startup.

Shutdown

b. For the Nos. 4 and 5 Lime Kilns **(ID Nos. G09028 and G09029)**, shutdown begins when lime mud feed is stopped for the purposes of shutting down. Shutdown ends when there is no combustion of fuel in the lime kiln. During the period of lime kiln shutdown, operators will operate the scrubber with scrubber flows meeting the specifications for normal operations as defined in Table 2.2 D-2. The period of shutdown for the lime kilns managed in accordance with this work practice standard shall not be an excess emission under 40 CFR Part 63, Subpart MM or 15A NCAC 02D .1111. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these work practices are not conducted during shutdown.

Malfunction

c. For the Nos. 4 and 5 Lime Kilns **(ID Nos. G09028 and G09029)**, the following work practice will be followed for parameter excursions due to malfunctions:
   i. Upon knowledge of the parameter excursion, operators will take immediate steps to identify the root cause of the parameter excursion;
   ii. If the root cause of the parameter excursion cannot be determined within 4 operating hours from initial knowledge of parameter excursion, operators will initiate an orderly shutdown of the process. If the projected time to correct the parameter excursion exceeds 4 hours, operators will initiate an orderly shutdown of the process.
   iii. The parameter excursion shall be corrected as soon as practicable.

   The period of malfunction for the lime kilns managed in accordance with this work practice standard shall not be an excess emission under 40 CFR Part 63, Subpart MM or 15A NCAC 02D .1111. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these work practices are not conducted during malfunction.

4. No. 1 Hardwood Fiberline Bleaching System and No. 2 Pine Fiberline Bleaching System.

a. The Permittee shall comply with this CAA §112(j) standard until September 11, 2020. The initial compliance date for the applicable CAA §112(d) standard for ‘‘National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry” is September 11, 2020.

Startup

b. For the No. 1 Hardwood Fiberline Bleaching System **(ID No. G05012)** and the No 2 Pine Fiberline Bleaching System **(ID No. G05013)**, startup begins when pulp stock enters either bleach plant tower for chlorine dioxide application. Startup ends when all bleach plant towers are operating steady-state and normal operating conditions have been attained as determined by pulp brightness and D2 tower residual chlorine dioxide. Operators will operate the bleach plant scrubber with scrubber fan status, scrubber liquid recirculation rate, and scrubber effluent pH meeting the specifications for normal operations as defined in 2.2.C.1.h PRIOR to the introduction of stock to the bleach plant. The period of startup for the bleach plants managed in accordance with this work practice standard shall not be an excess emission under 40 CFR Part 63, Subpart S or 15A NCAC 02D .1111. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these work practices are not conducted during startup.

Shutdown

c. For the No. 1 Hardwood Fiberline Bleaching System **(ID No. G05012)** and the No 2 Pine Fiberline Bleaching System **(ID No. G05013)**, shutdown begins when pulp stock is no longer fed to the pre-bleach washers. Shutdown ends when chlorine dioxide flow to both towers is stopped and stock levels are brought to desired levels. During shutdown, operators will operate the bleach plant scrubber with scrubber fan status, scrubber liquid recirculation rate and scrubber effluent pH meeting the specifications for normal operations as defined in 2.2.C.1.h. The period of shutdown for the bleach plants managed in accordance with this work practice standard shall not be an excess emission under 40 CFR Part 63, Subpart S or 15A NCAC 02D .1111. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these work practices are not conducted during shutdown.

Malfunction

d. In the event of malfunction of a bleach plant scrubber or scrubber fan installed on the No. 1 Hardwood Fiberline Bleaching System control device **(ID No. 05-CD-002-01)** and the No 2 Pine Fiberline Bleaching System control device **(ID No. 05-CD-017-01)**, the following work practice will be followed:
   i. Upon knowledge of the parameter excursion, operators will take immediate steps to identify the root cause of the parameter excursion;
   ii. If the root cause of the parameter excursion cannot be determined within 2 operating hours from initial knowledge of the parameter excursion, operators will initiate an orderly shutdown of the process. If the projected time to correct the parameter excursion exceeds 2 hours, operators will initiate an orderly shutdown of the process. If required, the respective bleach plant will commence an orderly shutdown to a zero operating state defined as pulp washers being flushed and cleared of stock and application of chlorine dioxide to the bleach towers stopped. Stock may be held in the bleaching towers with no chlorine dioxide application after washers are cleared. In the event the malfunction is resolved prior to reaching a zero operating state, the orderly shutdown may be terminated, and the bleach plant equipment returned to normal operating condition.
   iii. The parameter excursion shall be corrected as soon as practicable.

   The period of malfunction for the bleach plants managed in accordance with this work practice standard shall not be an excess emission under 40 CFR Part 63, Subpart S or 15A NCAC 02D .1111. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these work practices are not conducted during malfunction.

2.3- STATE ONLY ENFORCEABLE REQUIREMENTS

A. North Carolina Air Toxics

1. 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS

a. Pursuant to 15A NCAC 02D .1100 and in accordance with the approved application for an air toxic compliance demonstration, the following permit limits in Table 2.3 A-1 shall not be exceeded.

Recordkeeping

b. For compliance purposes, the Permittee shall maintain records of production rates, throughput, material usage, periods of excess emissions, failure of air pollution control equipment to operate in a normal and usual manner, and other process operational information, that allows for evaluation for compliance with the toxic air pollutant limits. These records shall be retained for a minimum of three years from the date of recording, and access to these records shall be provided to the Division of Air Quality staff upon request.

Reporting

c. For compliance purposes, within thirty (30) days after each calendar year quarter the following shall be reported to the Regional Supervisor, Division of Air Quality:
   i. Any and all exceedances of applicable toxic air pollutant emission limits during the previous calendar year quarter.
   ii. The maximum pounds per 1-hour emission rate at any time during the previous calendar year quarter for all applicable toxic air pollutants that have a listed emission rate in pounds per hour.
   iii. The maximum pounds per 24-hour emission rate at any time during the previous calendar year quarter for all applicable toxic air pollutants that have a listed emission rate in pounds per day.
   iv. The yearly emission rate for the 12-month period ending with the previous calendar year quarter for all applicable toxic air pollutants that have a listed emission rate in pounds per year.

Table 2.3 A-1

Permit ID	Permit Emission Source Description	Proposed Air Toxics Emissions Rates (lb/hr)													
		Acet-aldehyde	Acrolein	Ammonia	Benzene	Chlorine	Chloro-benzene	Chlorform	Cresol	Form-aldehyde	H_2S	HCl	Methyl Mercaptan	MEK	Phenol
Point Sources															
G12051	**No. 11 Paper Machine**	1.68E+01	6.80E-02	1.42E+01						1.42E+00				3.09E+00	
G12050	**No. 12 Paper Machine**	1.68E+01	6.80E-02	1.42E+01						1.42E+00				3.09E+00	
G12049	**No. 19 Paper Machine**	6.11E+01	2.47E-01	1.42E+01				5.56E+00		5.15E+00				1.12E+01	
G12048	**No. 20 Paper Machine**	3.36E+01	1.36E-01	1.42E+01				5.38E-01		2.83E+00				6.18E+00	
G06014	**Chlorine Dioxide Generation System**	9.52E-02				3.91E+00		1.98E-04		1.64E-02		4.56E+00		5.47E-02	
I-G08074	**Chloride Removal Process (CRP)**	9.66E-03													
G10035	**No. 5 Lime Slaker**	1.71E+01		1.67E+01	9.78E-03									1.11E+00	
G10034	**No. 6 Lime Slaker**	1.14E+01		1.11E+01	6.52E-03									7.39E-01	
G21072	**Tall Oil Reactor**	2.24E-01	2.86E-03		7.66E-04		1.06E+00				6.73E-01		2.56E-01	5.27E-01	1.18E+01
G04011	**White Liquor Oxidation System**	3.23E-01			1.07E-02									4.27E-01	
G09027.09-TK-001	**No. 4 Lime Precoat Filter**	1.40E-01	7.28E-04		5.73E-04		3.30E+00			1.14E-02				5.62E-02	
G09027.09-TK-002	**No. 5 Lime Precoat Filter**	2.52E-01	1.31E-03		1.15E-03		6.61E+00			2.05E-02				1.01E-01	
G09027.09-TK-004	**No. 6 Lime Precoat Filter**	1.12E-01	5.82E-04		4.85E-04		2.85E+00			9.10E-03				4.49E-02	
G05073	**Minerals Removal Process (MRP)**							9.52E-03							
Volume Sources															
G16081	**WTP Primary Clarifiers (No. 2)[a]**	3.92E+01		1.35E-01		8.40E-03			2.89E-02	1.42E-01				2.86E+01	1.77E-01
G16081	**WTP Primary Clarifiers (No. 3)**	3.92E+01		1.35E-01		8.40E-03			2.89E-02	1.42E-01				2.86E+01	1.77E-01
G23066.k	**No. 1 Fiberline Building Ventilation Fugitives**	2.14E+01													
G23066.l	**No. 2 Fiberline Building Ventilation Fugitives**	1.67E+00	1.78E-01		3.73E-04					6.66E-02	9.03E-02		5.53E-02	8.05E+00	

[a] Emission rates exclude hydrogen sulfide and methyl mercaptan from wastewater sources.

Table 2.3 A-1

Permit ID	Permit Emission Source Description	Proposed Air Toxics Emissions Rates (lb/hr)													
		Acet-aldehyde	Acrolein	Ammonia	Benzene	Chlorine	Chloro-benzene	Chlorform	Cresol	Form-aldehyde	H_2S	HCl	Methyl Mercaptan	MEK	Phenol
G07019.07-TK-023	**Heavy Liquor Storage Tanks (East)**	7.85E-01			2.89E-05			1.04E-03		8.34E-03	8.29E-01		1.00E-01	1.27E+00	
G07019.07-TK-024	**Heavy Liquor Storage Tanks (West)**	7.85E-01			2.89E-05			1.04E-03		8.34E-03	8.29E-01		1.00E-01	1.27E+00	
G07019.07-TK-022	**Heavy Liquor Storage Tanks (Red liquor tank)**	7.85E-01			2.89E-05			1.04E-03		8.34E-03	8.29E-01		1.00E-01	1.27E+00	
G03007	**Reject knots (hardwood knotter pile)**									4.87E-02				2.66E-01	
G03007	**Reject knots (pine knotter pile)**									4.00E-02				2.18E-01	
G07086	**Weak Black Liquor Storage Tanks (Eight Tanks)**	9.19E-02	1.40E-03		1.49E-03						1.93E+00			5.47E-01	
G24092	**Hardwood Brownstock High Density Storage**	1.32E-01			3.35E-05			7.21E-04					3.70E-03	2.32E-01	1.47E+00
G24094	**Pine Brownstock High Density Storage**	1.32E-01			3.35E-05			7.21E-04					3.70E-03	2.32E-01	1.47E+00
G10089 and G10090	**Green Liquor Clarification and Storage and Green Liquor Stabilization**	5.35E-02			3.42E-03								8.82E-03	3.15E-01	
I-G10036	**Causticizing Tanks**	3.53E-01		1.59E+01	8.32E-05									1.10E-02	
	Total	**263**	**0.704**	**101**	**0.0355**	**3.93**	**13.8**	**6.11**	**0.0578**	**11.3**	**5.18**	**4.56**	**0.628**	**97.5**	**15.1**

2.4- Multiple Emission Source(s) Specific Limitations and Conditions

STATE-ONLY REQUIREMENT:

A. 15A NCAC 02D .0543 BEST AVAILABLE RETROFIT CONTROL TECHNOLOGY

Based on the review of Permit Application 4400159.06E, and with the consideration of comments received from interested parties, the DAQ has determined that Best Available Retrofit Technology (BART) for the following emission sources subject to the requirements contained in 15A NCAC 02D .0543 "Best Available Retrofit Technology" is no additional controls.

Emission Source	Description
G08020	No. 10 Recovery Furnace
G08021	No. 11 Recovery Furnace
G08022	Black Liquor Oxidation System
G08023	No. 10 Smelt Dissolving Tank
G08024	No. 11 Smelt Dissolving Tank

SECTION 3 - GENERAL CONDITIONS (version 4.0 12/17/2015)

This section describes terms and conditions applicable to this Title V facility.

A. **General Provisions** [NCGS 143-215 and 15A NCAC 02Q .0508(i)(16)]
1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 02D and 02Q.
2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.

B. **Permit Availability** [15A NCAC 02Q .0507(k) and .0508(i)(9)(B)]
The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environmental Quality upon request.

C. **Severability Clause** [15A NCAC 02Q .0508(i)(2)]
In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.

D. **Submissions** [15A NCAC 02Q .0507(e) and 02Q .0508(i)(16)]
Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NOx budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

Supervisor, Stationary Source Compliance
North Carolina Division of Air Quality
1641 Mail Service Center
Raleigh, NC 27699-1641

All submittals shall include the facility name and Facility ID number (refer to the cover page of this permit).

E. **Duty to Comply** [15A NCAC 02Q .0508(i)(3)]
The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

F. **Circumvention** - STATE ENFORCEABLE ONLY
The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air pollution control device(s) and appurtenances.

G. **Permit Modifications**
1. Administrative Permit Amendments [15A NCAC 02Q .0514]
The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 02Q .0514.
2. Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 02Q .0524 and 02Q .0505]
The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 02Q.0524 and 02Q .0505.
3. Minor Permit Modifications [15A NCAC 02Q .0515]
The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 02Q .0515.
4. Significant Permit Modifications [15A NCAC 02Q .0516]
The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 02Q .0516.
5. Reopening for Cause [15A NCAC 02Q .0517]
The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 02Q .0517.

H. **Changes Not Requiring Permit Modifications**
1. Reporting Requirements
Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:
   a. changes in the information submitted in the application;
   b. changes that modify equipment or processes; or
   c. changes in the quantity or quality of materials processed.

If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

2. Section 502(b)(10) Changes [15A NCAC 02Q .0523(a)]
   a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
   b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
      i. the changes are not a modification under Title I of the Federal Clean Air Act;
      ii. the changes do not cause the allowable emissions under the permit to be exceeded;
      iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
      iv. the Permittee shall attach the notice to the relevant permit.
   c. The written notification shall include:
      i. a description of the change;
      ii. the date on which the change will occur;
      iii. any change in emissions; and
      iv. any permit term or condition that is no longer applicable as a result of the change.
   d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
3. Off Permit Changes [15A NCAC 02Q .0523(b)]
The Permittee may make changes in the operation or emissions without revising the permit if:
   a. the change affects only insignificant activities and the activities remain insignificant after the change; or
   b. the change is not covered under any applicable requirement.
4. Emissions Trading [15A NCAC 02Q .0523(c)]

To the extent that emissions trading is allowed under 15A NCAC 02D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 02Q .0523(c).

I.A. **Reporting Requirements for Excess Emissions and Permit Deviations**

[15A NCAC 02D .0535(f) and 02Q .0508(f)(2)]

"Excess Emissions" - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 02D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 02Q .0700. *(Note: Definitions of excess emissions under 02D .1110 and 02D .1111 shall apply where defined by rule.)*

"Deviations" - for the purposes of this condition, any action or condition not in accordance with the terms and conditions of this permit including those attributable to upset conditions as well as excess emissions as defined above lasting less than four hours.

Excess Emissions

1. If a source is required to report excess emissions under NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or the operating permit provides for periodic (e.g., quarterly) reporting of excess emissions, reporting shall be performed as prescribed therein.
2. If the source is not subject to NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 02D .0535 as follows:
    a. Pursuant to 15A NCAC 02D .0535, if excess emissions last for more than four hours resulting from a malfunction, a breakdown of process or control equipment, or any other abnormal condition, the owner or operator shall:
        i. notify the Regional Supervisor or Director of any such occurrence by 9:00 a.m. Eastern Time of the Division's next business day of becoming aware of the occurrence and provide:
            - name and location of the facility;
            - nature and cause of the malfunction or breakdown;
            - time when the malfunction or breakdown is first observed;
            - expected duration; and
            - estimated rate of emissions;
        ii. notify the Regional Supervisor or Director immediately when corrective measures have been accomplished; and
        iii. submit to the Regional Supervisor or Director within 15 days a written report as described in 15A NCAC 02D .0535(f)(3).

Permit Deviations

3. Pursuant to 15A NCAC 02Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
    a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 02D .0535 quarterly. A written report to the Regional Supervisor shall include the probable cause of such deviation and any corrective actions or preventative actions taken. The responsible official shall certify all deviations from permit requirements.

I.B. **Other Requirements under 15A NCAC 02D .0535**

The Permittee shall comply with all other applicable requirements contained in 15A NCAC 02D .0535, including 15A NCAC 02D .0535(c) as follows:

1. Any excess emissions that do not occur during start-up and shut-down shall be considered a violation of the appropriate rule unless the owner or operator of the sources demonstrates to the Director, that the excess emissions are a result of a malfunction. The Director shall consider, along with any other pertinent information, the criteria contained in 15A NCAC 02D .0535(c)(1) through (7).
2. 15A NCAC 02D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

J. **Emergency Provisions** [40 CFR 70.6(g)]
The Permittee shall be subject to the following provisions with respect to emergencies:
1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
   a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
   b. the permitted facility was at the time being properly operated;
   c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
   d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

K. **Permit Renewal** [15A NCAC 02Q .0508(e) and 02Q .0513(b)]
This 15A NCAC 02Q .0500 permit is issued for a fixed term not to exceed five years and shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete 15A NCAC 02Q .0500 renewal application is submitted at least nine months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 02Q .0512(b)(1), this 15A NCAC 02Q .0500 permit shall not expire until the renewal permit has been issued or denied. Permit expiration under 15A NCAC 02Q .0400 terminates the facility's right to operate unless a complete 15A NCAC 02Q .0400 renewal application is submitted at least six months before the date of permit expiration for facilities subject to 15A NCAC 02Q .0400 requirements. In either of these events, all terms and conditions of these permits shall remain in effect until the renewal permits have been issued or denied.

L. **Need to Halt or Reduce Activity Not a Defense** [15A NCAC 02Q .0508(i)(4)]
It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

M. **Duty to Provide Information (submittal of information)** [15A NCAC 02Q .0508(i)(9)]
1. The Permittee shall furnish to the DAQ, in a timely manner, any reasonable information that the Director may request in **writing** to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
2. The Permittee shall furnish the DAQ copies of records required to be kept by the permit when such copies are requested by the Director. For information claimed to be confidential, the Permittee may furnish such records directly to the EPA upon request along with a claim of confidentiality.

N. **Duty to Supplement** [15A NCAC 02Q .0507(f)]
The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the DAQ. The Permittee shall also provide additional information as necessary to address any requirement that becomes applicable to the facility after the date a complete permit application was submitted but prior to the release of the draft permit.

O. **Retention of Records** [15A NCAC 02Q .0508(f) and 02Q .0508 (l)]
The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring information, and

copies of all reports required by the permit. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request.

P. **Compliance Certification** [15A NCAC 02Q .0508(n)]
The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:
1. the identification of each term or condition of the permit that is the basis of the certification;
2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
3. whether compliance was continuous or intermittent; and
4. the method(s) used for determining the compliance status of the source during the certification period.

Q. **Certification by Responsible Official** [15A NCAC 02Q .0520]
A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

R. **Permit Shield for Applicable Requirements** [15A NCAC 02Q .0512]
1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
2. A permit shield shall not alter or affect:
   a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
   b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
   c. the applicable requirements under Title IV; or
   d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 02Q .0523.
4. A permit shield does not extend to minor permit modifications made under 15A NCAC 02Q .0515.

S. **Termination, Modification, and Revocation of the Permit** [15A NCAC 02Q .0519]
The Director may terminate, modify, or revoke and reissue this permit if:
1. the information contained in the application or presented in support thereof is determined to be incorrect;
2. the conditions under which the permit or permit renewal was granted have changed;
3. violations of conditions contained in the permit have occurred;
4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or
5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

T. **Insignificant Activities** [15A NCAC 02Q .0503]
Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all times and made available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

U. **Property Rights** [15A NCAC 02Q .0508(i)(8)]
This permit does not convey any property rights in either real or personal property or any exclusive privileges.

V. **Inspection and Entry** [15A NCAC 02Q .0508(l) and NCGS 143-215.3(a)(2)]
1. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the DAQ, or an authorized representative, to perform the following:
   a. enter the Permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept under the conditions of the permit;
   b. have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
   c. inspect at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
   d. sample or monitor substances or parameters, using reasonable safety practices, for the purpose of assuring compliance with the permit or applicable requirements at reasonable times.

   Nothing in this condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee under Section 114 or other provisions of the Federal Clean Air Act.
2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

W. **Annual Fee Payment** [15A NCAC 02Q .0508(i)(10)]
1. The Permittee shall pay all fees in accordance with 15A NCAC 02Q .0200.
2. Payment of fees may be by check or money order made payable to the N.C. Department of Environmental Quality. Annual permit fee payments shall refer to the permit number.
3. If, within 30 days after being billed, the Permittee fails to pay an annual fee, the Director may initiate action to terminate the permit under 15A NCAC 02Q .0519.

X. **Annual Emission Inventory Requirements** [15A NCAC 02Q .0207]
The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 02Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

Y. **Confidential Information** [15A NCAC 02Q .0107 and 02Q. 0508(i)(9)]
Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 02Q .0107, the Permittee may also submit a copy of all such information and claim directly to the EPA upon request. All requests for confidentiality must be in accordance with 15A NCAC 02Q .0107.

Z. **Construction and Operation Permits** [15A NCAC 02Q .0100 and .0300]
A construction and operating permit shall be obtained by the Permittee for any proposed new or modified facility or emission source which is not exempted from having a permit prior to the beginning of construction or modification, in accordance with all applicable provisions of 15A NCAC 02Q .0100 and .0300.

AA. **Standard Application Form and Required Information** [15A NCAC 02Q .0505 and .0507]
The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 02Q .0505 and .0507.

BB. **Financial Responsibility and Compliance History [**15A NCAC 02Q .0507(d)(4)]
The DAQ may require an applicant to submit a statement of financial qualifications and/or a statement of substantial compliance history.

CC. **Refrigerant Requirements (Stratospheric Ozone and Climate Protection)** [15A NCAC 02Q .0501(e)]
1. If the Permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR Part 82 Subpart A Appendices A and B, the Permittee shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82 Subpart F.

2. The Permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR Part 82 Subpart F.
3. The Permittee shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the EPA or its designee as required.

DD. **Prevention of Accidental Releases - Section 112(r)** [15A NCAC 02Q .0508(h)]
If the Permittee is required to develop and register a Risk Management Plan with EPA pursuant to Section 112(r) of the Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

EE. **Prevention of Accidental Releases General Duty Clause - Section 112(r)(1)** -FEDERALLY-ENFORCEABLE ONLY
Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.

FF. **Title IV Allowances** [15A NCAC 02Q .0508(i)(1)]
This permit does not limit the number of Title IV allowances held by the Permittee, but the Permittee may not use allowances as a defense to noncompliance with any other applicable requirement. The Permittee's emissions may not exceed any allowances that the facility lawfully holds under Title IV of the Federal Clean Air Act.

GG. **Air Pollution Emergency Episode** [15A NCAC 02D .0300]
Should the Director of the DAQ declare an Air Pollution Emergency Episode, the Permittee will be required to operate in accordance with the Permittee's previously approved Emission Reduction Plan or, in the absence of an approved plan, with the appropriate requirements specified in 15A NCAC 02D .0300.

HH. **Registration of Air Pollution Sources** [15A NCAC 02D .0200]
The Director of the DAQ may require the Permittee to register a source of air pollution. If the Permittee is required to register a source of air pollution, this registration and required information will be in accordance with 15A NCAC 02D .0202(b).

II. **Ambient Air Quality Standards** [15A NCAC 02D .0501(c)]
In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in 15A NCAC 02D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

JJ. **General Emissions Testing and Reporting Requirements** [15A NCAC 02Q .0508(i)(16)]
Emission compliance testing shall be by the procedures of Section .2600, except as may be otherwise required in Rules .0524, .0912, .1110, .1111, or .1415 of Subchapter 02D.
If emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 02D .2600 and follow the procedures outlined below:
1. The owner or operator of the source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved by the Director prior to air pollution testing. The Director shall review air emission testing protocols for pre-approval prior to testing if requested by the owner or operator at least **45 days** before conducting the test.
2. Any person proposing to conduct an emissions test to demonstrate compliance with an applicable standard shall notify the Director at least **15 days** before beginning the test so that the Director may at his option observe the test.
3. The owner or operator of the source shall arrange for controlling and measuring the production rates during the period of air testing. The owner or operator of the source shall ensure that the equipment or process being tested is operated at the production rate that best fulfills the purpose of the test. The individual conducting the emission test shall describe the procedures used to obtain accurate process data and include in the test report the average production rates determined during each testing period.
4. Two copies of the final air emission test report shall be submitted to the Director not later than **30 days** after sample collection unless otherwise specified in the specific conditions. The owner or operator may request an

extension to submit the final test report. The Director shall approve an extension request if he finds that the extension request is a result of actions beyond the control of the owner or operator.

a. The Director shall make the final determination regarding any testing procedure deviation and the validity of the compliance test. The Director may:
   i. Allow deviations from a method specified under a rule in this Section if the owner or operator of the source being tested demonstrates to the satisfaction of the Director that the specified method is inappropriate for the source being tested.
   ii. Prescribe alternate test procedures on an individual basis when he finds that the alternative method is necessary to secure more reliable test data.
   iii. Prescribe or approve methods on an individual basis for sources or pollutants for which no test method is specified in this Section if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
b. The Director may authorize the Division of Air Quality to conduct independent tests of any source subject to a rule in this Subchapter to determine the compliance status of that source or to verify any test data submitted relating to that source. Any test conducted by the Division of Air Quality using the appropriate testing procedures described in Section 02D .2600 has precedence over all other tests.

KK. **Reopening for Cause** [15A NCAC 02Q .0517]

1. A permit shall be reopened and revised under the following circumstances:
   a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
   b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;
   c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
   d. the Director or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 02Q .0513(c).
3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 02Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 02Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.
4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

LL. **Reporting Requirements for Non-Operating Equipment** [15A NCAC 02Q .0508(i)(16)]

The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. During operation the monitoring recordkeeping and reporting requirements as prescribed by the permit shall be implemented within the monitoring period.

MM. **Fugitive Dust Control Requirement** [15A NCAC 02D .0540] - STATE ENFORCEABLE ONLY

As required by 15A NCAC 02D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 02D .0540(f).

"Fugitive dust emissions" means particulate matter from process operations that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

NN. **Specific Permit Modifications** [15A NCAC 02Q.0501 and .0523]

1. For modifications made pursuant to 15A NCAC 02Q .0501(c)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
2. For modifications made pursuant to 15A NCAC 02Q .0501(d)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 02Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth Street SW, Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:
   a. a description of the change at the facility;
   b. the date on which the change will occur;
   c. any change in emissions; and
   d. any permit term or condition that is no longer applicable as a result of the change.

   In addition to this notification requirement, with the next significant modification or Air Quality Permit renewal, the Permittee shall submit a page "E5" of the application forms signed by the responsible official verifying that the application for the 502(b)(10) change/modification, is true, accurate, and complete. Further note that modifications made pursuant to 502(b)(10) do not relieve the Permittee from satisfying preconstruction requirements.

OO. **Third Party Participation and EPA Review** [15A NCAC 02Q .0521, .0522 and .0525(7)]
For permit modifications subject to 45-day review by the federal Environmental Protection Agency (EPA), EPA's decision to not object to the proposed permit is considered final and binding on the EPA and absent a third party petition, the failure to object is the end of EPA's decision-making process with respect to the revisions to the permit. The time period available to submit a public petition pursuant to 15A NCAC 02Q .0518 begins at the end of the 45-day EPA review period.

ATTACHMENT

List of Acronyms

AOS	Alternate Operating Scenario
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
CEM	Continuous Emission Monitor
CFR	Code of Federal Regulations
DAQ	Division of Air Quality
DEQ	Department of Environmental Quality
DENR	Department of Environment and Natural Resources
EMC	Environmental Management Commission
EPA	Environmental Protection Agency
FR	Federal Register
GACT	Generally Available Control Technology
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
NAA	Non-Attainment Area
NCAC	North Carolina Administrative Code
NCGS	North Carolina General Statutes
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_X	Nitrogen Oxides
NSPS	New Source Performance Standard
OAH	Office of Administrative Hearings
PM	Particulate Matter
PM_{10}	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
POS	Primary Operating Scenario
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
tpy	Tons Per Year
VOC	Volatile Organic Compound